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### **Towards a Dual Education System — A Labour Market Perspective on Poverty Reduction in Bolivia**

**by**

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# **Towards a Dual Education System – A Labour Market Perspective on Poverty Reduction in Bolivia<sup>1</sup>**

## ***Abstract:***

This paper addresses poverty reduction strategies from a labour market perspective. Structural features and constraints are emphasised using informality as a descriptive and segmentation as an analytical concept. Divergent demand-side developments combined with limited labour market mobility result in labour market segmentation. Vicious skill circles are identified that keep the poor trapped in jobs with low incomes. The analysis of the dimensions of informality in the Bolivian labour market shows that its characteristics do not correspond to the conventionally assumed informal-formal dichotomy. Empirical studies on the Bolivian case are reviewed that support the hypothesis of a segmented labour market with vicious poverty circles. The major policy conclusion for poverty reduction drawn from the analysis is that education should be more focused on employment.

***Keywords: Dual education system, poverty reduction, Bolivia***

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## I. INTRODUCTION AND OVERVIEW

Despite the implementation of a series of stabilisation and structural adjustment measures since 1985, Bolivia's poverty level has not changed as much as expected by the advocates of these reforms. To this date, Bolivia remains one of the poorest countries in Latin America. The limited success of development strategies on efficiency as well as on equity grounds is no exception among the countries that followed the recommendations of the World Bank and the International Monetary Fund (IMF) in the 1980s and 1990s. The tendency of the Washington institutions to promote rapid market liberalisation as the panacea of economic development seemingly irrespective of a country's specific circumstances has become increasingly under attack. "Give them an inch of nuance, and they'll take a mile of the status quo" (Kanbur and Vines, 2000, p. 101) seems to be an appropriate description of their stance and attitude. By the mid-1990s, they were regarded by the public in many developing countries as an enemy of the poor (Kanbur and Vines, 2000, pp. 100-101). Liberalisation was considered as the basis of growth, and growth combined with the provision of basic educational, health, and social services would reduce poverty. The dissatisfaction with the results of the free-market approach, in particular in the aftermath of the East Asian crisis, has led to a more comprehensive understanding of poverty and poverty reduction measures in recent years. In particular, institutional aspects are stressed more frequently, going beyond the state-versus-market dichotomy. The structural characteristics of developing economies are recognised and emphasised (for example Meier, 2000, p. 39). On an operational level, an example for this new thinking are the Poverty Reduction Strategy Papers (PRSPs) demanded from the participants in the Highly Indebted Poor Countries (HIPC) Initiative, e.g. from Bolivia.<sup>1</sup>

This paper contributes to a comprehensive approach to poverty reduction, which takes into account the structural conditions prevailing in the labour market of a developing economy. The labour market transmits technological and structural changes and policies into employment and incomes. In contrast to rural

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<sup>1</sup> The HIPC initiative is a debt relief mechanism for very poor countries. For details for the Bolivian case, see e.g. Andersen and Nina (2000).

areas, people in urban economies rely on market exchanges and, consequently, on cash income. The poor generate cash income almost exclusively on the labour market. Thus, the understanding of the labour market is crucial to the analysis of urban poverty. The central policy themes in urban poverty reduction, such as education, social protection, and microenterprise development, are closely related to the labour market. Thus, a labour market perspective yields important insights for comprehensive poverty reduction strategies. This contrasts with the view of many analysts, who still address labour market issues under the label of liberalisation and flexibilisation (Guasch, 1999).

Segmentation and the presence of an informal sector have often been referred to as the principal characteristics of the labour market in developing countries. In the second chapter, a labour market view is developed that emphasises structural features and constraints. The guiding ideas will be informality as a descriptive and segmentation as an analytical concept. Different approaches to labour markets in developing economies are reviewed. Segmentation is found to be driven by divergent demand-side developments combined with limited labour market mobility. In segmented labour markets, which exhibit an important degree of informality, vicious circles will be identified that keep people trapped in jobs with low incomes and, therefore, in poverty. The third chapter analyses the structural characteristics and the functioning of the Bolivian labour market. To this end, the degree of informality in the labour market is explored. Empirical studies are reviewed that support the hypothesis of a segmented labour market with vicious poverty circles. The policy implications for poverty reduction efforts in Bolivia are formulated in the fourth chapter. The last chapter concludes with an outlook with regard to future theoretical and empirical research, and policy formulation.

## **II. URBAN LABOUR MARKETS IN DEVELOPING COUNTRIES: ISSUES AND THEORY**

According to mainstream economic analysis, the mechanisms of urban labour markets in developing economies are not fundamentally different from those in advanced countries (Rosenzweig, 1988, p. 755, and Behrman, 1999, p. 2916). On the contrary, structuralists argue that labour market analysis should account for the specific structural characteristics of developing countries.

Against the background of this ongoing debate, this chapter examines analytical approaches that contribute to a better understanding of the operation of urban labour markets in developing economies. The informal sector concept and segmentation theory are fundamental building blocks of these approaches. To this end, the literature on the informal sector is reviewed. The first part is concerned with definitional issues, and the second part examines the role of the informal sector in labour market analysis. The third part reviews different approaches to labour market segmentation. The labour market model set up in the fourth part builds on some of these approaches. According to this labour market perception, segmentation results from divergent demand-side developments combined with limited labour market mobility. Some of the conventional hypotheses about the relation between informality and segmentation are challenged. The chapter concludes with additional insights with regard to the supply-side.

### **II.1. Dimensions of Informality – Solving Definitional Problems**

The informal sector is a concept introduced by development practitioners and economists to capture the activities of street vendors, shoeshine boys, crafts workers, lottery sellers and many similar menial activities that account for an important share of economic activities in developing countries (de Soto, 1989, p. 3). This part attempts to shed light on this concept, which has been subject to an intensive and long-lasting definitional debate. In addition, a framework to address and circumvent these definitional problems of informality will be proposed.

Most of the early development economists regarded the people who carry out the above “informal” activities as belonging to “the reserve army of underemployed and unemployed”, “the disguised unemployed” or “the urban traditional sector” that the modern sector failed to absorb (Hart, 1973, p. 68). In the 1950s, dualistic perceptions of the economy became an important element of the analysis of developing economies. Hence, when modelling the developing economy, a traditional, agricultural, or subsistence sector was contrasted with a modern, industrial, or capitalist sector. This simple dualistic model lumped together all the above activities as part of a subsistence economy, which constituted a major portion of employment in developing countries.<sup>2</sup> Critics argued that this simple conceptual dichotomy did not reflect the complex reality of the growing urban centres in developing economies. According to their view, more refined and rigorous concepts were needed. The concept of the informal sector – originally introduced by development practitioners – corresponds to this gap in the theoretical apparatus in development economics.<sup>3</sup> These practitioners realised that employment creation through industrial modernisation was insufficient. Thereby, they recognised informal sector activities that were carried out by those “outside the organised labour force” in modern firms, as a potential source of employment creation (Hart, 1973, p. 68). The originators of the concept already stressed that the informal sector included heterogeneous forms of production and organisation, ranging from marginal occupations to large-scale operations, but they did not formulate a clear definitional concept. Nevertheless, they triggered a definitional debate that to this date has not been resolved despite an immense body of literature.<sup>4</sup>

Some argue that the core of this dispute is the question whether one views the informal sector as a sector of the labour market or whether one is more concerned with the informal sector as a conglomerate of enterprises with specific

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<sup>2</sup> See for example the seminal articles of Lewis (1954), who differentiates between a capitalist and a subsistence sector, or Ranis and Fei (1961), who, building on Lewis’ work, construct a dualistic model with an agricultural and a modern sector but neglect the existence of an urban labour force outside the modern sector.

<sup>3</sup> See Peattie (1987, p. 852). The following explanations base on Hart (1973, pp. 68-69), who is frequently considered as one of the originators of the informal sector concept.

<sup>4</sup> For discussions on the concept of the informal sector, see Moser (1978), Peattie (1987), Moser (1994), Rakowsky (1994b), Peattie (1996) and Amin (1996).



characteristics (Moser, 1994, p. 13). Peattie (1987, p. 858) suggests bypassing the discussion about the informal sector, since the concept will not provide a useful device to address the problems of developing economies and to formulate policies. In the following, it will be suggested to move away from the attempt to find a universal “informal sector” definition. The definitional problem is rather rooted in defining “sector” than in characterising “informal”; and what is meant by sector depends very much on the topic of interest. If the employment creation capacity of the informal sector is of interest, the definition refers to enterprise characteristics, such as small size or adapted technology. If one analyses the impact of labour market interventions, the informal sector refers to the part of the labour force that is not covered by formal labour market regulations. Still, common practice does not resolve the definitional problem, as there may well be small sized firms that use advanced technology, for example. Adding that the informal sector is heterogeneous has circumvented these definitional contradictions. However, it is not helpful to make heterogeneity a central argument of a definition. Taken together, the quest for a universal definition of the informal sector is pointless.

The approach proposed in the following discussion emphasises a context-specific conceptualisation of informality. According to this conceptualisation, informality should be defined and applied with regard to a specific dimension of either enterprise/activity or employment characteristics.<sup>5</sup> Thus, the perceptions of the informal sector as a labour market sector or as a set of activities are considered rather as complementary than mutually exclusive conceptions. The dimensions of enterprise/activity characteristics are ease of entry, size, technology, and legal status. Employment-related dimensions are ease of entry, employment categories, e.g. salaried vs. self-employed, employment stability, and the degree of protection. In order to use these dimensions for a better understanding of labour markets, they should be analysed separately in a first step. In a second step, one should attempt to combine the enterprise-related and employment-related characteristics into a holistic picture. The following

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<sup>5</sup> Here, we are concerned with the aspects of informality in the labour market. Informality also plays an important role in settlement and urban planning issues. In this context, we would need a different approach.

paragraphs deal with the informal dimensions with regard to the enterprise/activity characteristics.

### ***a) Ease of Entry***

Ease of entry means that there are no barriers to set up a business, such as necessary upfront investment and/or legal restrictions etc.. A lot of activities that are typically classified as informal, such as street-vending or shoe-shining, exhibit free-entry, since little human or real capital is needed. Ease of entry does not hold for all activities described in the introduction of this part. It has long been recognised that many activities of the self-employed or employers require substantial capital, e.g. the purchase of a taxi. Many observers consider ease of entry as the critical feature of the informal sector, as it determines market structures (Fields, 1990, p. 54). Thus, one might expect the markets for shoe shining, street vending or similar activities to be highly competitive.

### ***b) Size and Organisation***

Informal sector firms or establishments are typically assumed to be small-sized. The self-employed, who are supported by family members, constitute an important part of the informal sector. Hence, many of the firms are family businesses, and the number of additional employees or workers does not exceed a certain limit. In small- and microenterprise (SME) surveys, this number varies between 5 and 20 (Lubell, 1991, p. 11).<sup>6</sup> It depends on registration procedures in the respective country or statistical conventions. The organisational structure of the business is simple. In the case of larger enterprises, the distinguishing feature of informality is that the owner of the enterprise usually participates in production, i.e. managerial tasks and production are not separated.

### ***c) Technology***

The production technology used in the informal sector is typically older, less mechanised, and more labour intensive than in the formal sector, whereas the formal sector often relies on imported capital-intensive technology. Yet, the

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<sup>6</sup> Although definitions are arbitrary, a common approach identifies microenterprises, of which a major part are family enterprises, as entities with less than 10 employees. Small enterprises have between 10 and 20 employees.

degree of technological distinctiveness depends very much on the specific activity. In food production or commerce, for example, the differences can be quite high, while in manufacturing, e.g. in the production of garments, they tend to be less accentuated.

#### *d) Legal Status*

Informal sector firms are not registered and do not pay taxes. They do not have access to formal settlement or contract enforcement mechanisms. Furthermore, property rights are often not adequately defined and entitled. In the 1990s, the legal status has become the major defining characteristic of informal sector firms. Hemmer and Wilhelm (2000, p. 105) define the informal sector as “all economic activities performed beyond formal regulations.” The issue of legality was already raised in the early works on the informal sector but brought to the centre of the discussion by de Soto (1989).<sup>7</sup>

The following paragraphs discuss the dimensions of informality in the employment relation.

#### *a) Ease of Entry*

Entry barriers into formal sector employment can consist of skill<sup>8</sup> requirements, educational credentials, or barriers created by trade unions or government interventions (Moser, 1994, p. 16). These barriers tend to be very low in the informal sector, since job opportunities often arise either directly in the family enterprise, through family ties or certain types of self-employment. In addition, skills are acquired at the workplace, and educational credentials are not required.

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<sup>7</sup> See Hart (1973). Some more details of de Soto’s perception of the informal sector will be given below.

<sup>8</sup> Since education, training, and skills are essential issues in this work, a precise definition of these expressions has to be given. Education refers to formal education. Training can be formal or informal, and takes place in employment. Skills are the result of education and training.

### ***b) Employment Category***

For many observers, the distinction between formal and informal sector roughly corresponds to the distinction between wage-employment and self-employment.<sup>9</sup> This approach has been expanded to include unremunerated family workers and domestic employees into informal sector employment.

### ***c) Degree of Protection***

People employed in the informal sector lack labour protection. Hence, they usually do not have a formal work contract, nor job security, nor social security coverage, such as health insurance or pension fund schemes. This is an aspect of the informal employment relation that is often stressed in labour market studies distinguishing between a formal protected and an informal unprotected sector (Edwards and Cox-Edwards, 2000, p. 23).

### ***d) Stability***

Stability is closely related to the former dimensions of informality. Rarely are informal sector jobs performed regularly on a day-to-day basis. Due to the lack of protection, instability in demand is immediately transferred to the labour force. Instability, however, does not only originate from the employer. Workers also take advantage of the lack of a formal employment arrangement to the detriment of their employers.

### ***Preliminary Remarks***

Once the characteristics of the enterprise/activity and the employment relation have been analysed one-dimensionally, one can set up a multi-dimensional approach that interrelates certain characteristics. It may be interesting, for example, to question the common assumption that unprotected or unstable employment is limited to small-sized firms. One might also gain useful insights from challenging the widespread belief that self-employment automatically implies free entry.<sup>10</sup>

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<sup>9</sup> See Hart (1973, p. 68) and Bromley and Gerry (1978, p. 5).

<sup>10</sup> Fields (1990, p. 68-69) also challenges this assumption. He proposes to distinguish between an upper-tier and an easy-entry informal sector. In the easy-entry informal sector, entry is

Such a multi-dimensional framework provides a descriptive tool of analysis that can be used to capture all relevant characteristics of a specific country. Besides preventing the researcher from making wrong a priori assumptions, it allows for a disaggregated view at the structures of the labour market.<sup>11</sup>

Last but not least, it should be noted that it might be useful to extend the above framework by allowing for different degrees of informality. For example, one might observe different degrees of social protection. Whereas part of the labour force might be completely unprotected, another part might be covered by a public social security system that is partially ineffective. Yet, a third group might be covered by private insurance schemes. Likewise, one can easily imagine that there are different degrees of entry barriers to jobs.

## **II.2. The Informal Sector in Labour Market Analysis**

The definitional question is closely linked to the role one assigns to the informal sector in the process of development and in the labour market. Some analysts, as for example de Soto (1989 and 2000), contribute the existence of the informal sector to governments in developing countries being incapable to provide the legal framework that is indispensable for successful capitalist development. Thus, the distinguishing feature of the informal sector is its operation beyond regulation. There is no doubt that these legal aspects are an issue of relevance, when the informal sector is discussed. Whether the government failure in providing a legal framework for business activities is at the roots of informality in its many dimensions, however, is not clear. Hence, the policy implications may not be as obvious as assumed by de Soto. This “legalist approach” (Rakowsky, 1994b, p. 39-43) sheds light on some important aspects of

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unrestricted, wages are low and the activities are unorganised and unprotected. Upper-tier informal activities are classified as self-employment with considerable entry barriers in terms of capital or skill requirements. In the analysis of structural adjustment, the assumption of an unprotected informal sector that produces non-tradables (Agénor, 1996, Agénor and Aizenman, 1994, Agénor and Montiel, 1999) gives another example for typical problematic a priori beliefs.

<sup>11</sup> Later, the proposed framework will be applied to theoretical and empirical labour market analyses.

employment in developing economies, and self-employment in particular, but it does not yield major insights into the workings of the labour market.

In the following paragraphs, we will review different perceptions of the labour market in developing economies. First, we consider the conventional and the structuralist perspectives that both understand the informal sector as a labour market segment, although their analytical focus is completely different.<sup>12</sup> Then, a position that challenges the basic assumptions and conclusions of the preceding approaches will be assessed.

### ***Institutionally Distorted Labour Markets***

A common labour market approach uses two-sector labour market models that are usually based on the following two assumptions. The informal sector is perceived as a “staging-post” for preferred formal sector jobs, and, furthermore, wages in the formal sector are institutionally set. One of the first formulations of a labour market model that includes the informal sector is Fields (1975).<sup>13</sup> Based on the “staging-post hypothesis”, he regards the informal sector, which he labels “murky sector”, as a segment of the labour market that provides migrants to urban areas with a source of subsistence income as long as they do not get formal sector employment. Fields’ extension of the Harris-Todaro model of rural-urban migration (Harris and Todaro, 1970). allows for employment in the rural, urban modern, or urban “murky” sector, and unemployment. There are not sufficient formal sector jobs. Formal or modern sector wages are institutionally set. The resulting wage in the free-entry “murky” sector is found to be lower than the competitively determined agricultural wage.<sup>14</sup> Based on these assumptions about the wage structure, Fields (1975, pp. 278-281) develops a dynamic model of migration, unemployment, and underemployment. The equalisation of

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<sup>12</sup> The next part will give a precise definition of labour market segmentation. For now, segments will be defined as sectors of the labour market with different characteristics as described by the respective groups.

<sup>13</sup> Although Fields (1975, p. 271 and 1990, p. 57) gives references to other authors, who introduced the informal sector into labour market models before, it is referred to his well-known article (Fields, 1975) here. A labour market model of rural-urban migration with an informal sector can also be found in Hemmer and Mannel (1987, pp. 12-14).

<sup>14</sup> In equilibrium, the wage in the informal sector has to be below the agricultural wage since, otherwise, nobody would remain in agriculture.

expected wages brings the model into equilibrium that determines wages and employment in the different sectors, and unemployment.

More recent work on labour markets in developing economies shares the main assumptions of this framework but does usually not refer to rural-urban linkages.<sup>15</sup> It has also moved away from considering the informal sector as a pure survival strategy. Still, the informal sector maintains its function as a “labour absorbing sponge” and as a “staging post” to formal sector employment. In an urban economy composed of a formal and an informal sector, minimum wage laws are assumed to be imposed only in the formal sector, which may also be covered by social security regulations.<sup>16</sup> Therefore, formal sector jobs are supposed to be preferred to informal sector jobs. They are rationed by above market clearing wages. These jobs are thought to be allocated among workers by a lottery-like process, i.e. some “win” a formal sector job. If the model does not allow for unemployment, all the “losers” get an informal sector job. This means that informal employment is higher and the wage is lower than in the undistorted equilibrium.

In these analyses, the informal sector is perceived as a disadvantaged segment of the labour market. It is disadvantaged due to different wage-setting mechanisms, which usually result from exogenous factors. Implicitly, the analysis assumes the existence of a single market-clearing wage. Since minimum wages are in most cases found to be binding, this equilibrium without distortions is typically not discussed. In these models, the large size of the informal sector –

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<sup>15</sup> Migration models, including an informal sector, receive attention in the literature until today. For a recent example see Chaudhuri (2000). Although internal migration plays a major role in determining labour market outcomes these considerations are not our main focus here.

<sup>16</sup> See for example Edwards and Cox-Edwards (2000), Agénor and Montiel (1999, pp. 71-75) or Agénor and Aizenman (1994). The characteristics assigned to the informal and formal sector depend on the issue of discussion. Agénor and Aizenman (1994), who discuss adjustment in segmented labour markets, assume the formal sector, subject to minimum wage laws, to produce a tradable good with skilled and unskilled labour, whereas the informal sector, where the minimum wage is not imposed, produces non-tradables only with unskilled labour. Edwards and Cox-Edwards (2000), who analyse the labour market implications of social security reforms, assume a formal sector where a social security tax is imposed and minimum wages are enforced, and an unprotected informal sector. Instead of the institutionally set wage, above market clearing wages can be the result of efficiency considerations or labour turnover costs.

as far as originated by institutionally set wages in the formal sector – indicates the need for labour market reforms. Labour market liberalisation is therefore a central theme in policy recommendations that derive from these analyses.

### *The Structuralist Perspective*

In contrast to the above perception of the labour market, structuralist approaches emphasise the structural context of developing economies.<sup>17</sup> The analyses focus on the production and market structures, production modes, technology, and formal-informal sector linkages, i.e. factors playing a decisive role in determining labour market outcomes. The structuralists interpret the informal sector as covering the lowest segments of the labour market in terms of income, stability and protection. This might not sound like a major difference to the former approach, but it is claimed that these lowest segments are not just the “losers” of the “formal employment lottery”. The differences in formal and informal sector wages are not due to institutional, often government imposed, factors, but correspond to the functional role of the respective sectors in the economic system, which is interpreted against the structural background of Latin America.

Economic analysis has to take into consideration this structural background, i.e. an extremely unequal distribution of assets, an accelerated growth of the workforce, which creates a situation of surplus labour in the cities, and insufficient creation of modern sector employment (Tokman, 1992b, p. 20, Tokman, 1995, p. 16). The historical economic development has led to a heterogeneous production structure and the different coexisting production modes correspond to specific occupational structures (Rao, 1995, p. 7). The personal income distribution is explained by structural factors. Structuralist views diverge significantly on what these structural factors are. Commonly, it is

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<sup>17</sup> Since this paper considers the case of Bolivia, the following paragraphs refer mainly to Latin American structuralists. By definition, structuralist approaches have a strong regional focus.



differentiated between the PREALC<sup>18</sup> and the “underground economy” approach.<sup>19</sup>

The PREALC analyses are based on a dualistic perception of the informal sector as a marginal labour market segment, although in later works, its heterogeneity is emphasised. Poverty is concentrated among certain groups in this heterogeneous informal sector. Labour market outcomes are closely linked to the organisation of the production process in the above-described structural context of surplus labour. Segmented labour markets match demand and supply that is considered unlimited in unskilled labour (Souza and Tokman, 1980, pp. 422-423). The role ascribed to the informal sector in this dualistic setting implies that incomes are low. The informal sector consists primarily of subsistence activities, which are not dynamically linked to the formal sector, although the existence of some linkages of exploitative character is recognised. The following vicious circle is at work in the informal sector. In general, productivity is low due to low human capital, but the lack of employment opportunities and low incomes do not allow for human capital accumulation.

The proponents of the underground approach share many basic assumptions about the structural background with the PREALC economists.<sup>20</sup> The underground economists stress the close formal-informal linkages and the heterogeneity within the informal sector. The consequences of excess labour supply are much more complex than the emergence of a more or less autonomous informal sector that secures the survival of the poor at the margin of society and the economic system. The informal sector is found to be an integrated part of the economic system. Informal-formal relationships represent the facets of the same economic system and can be interpreted as a “vast subsidy to formal capitalist enterprises” (Portes and Schauffler, 1993, p. 49). The labour

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<sup>18</sup> PREALC is the Spanish abbreviation for the Regional Employment Program of Latin America and the Caribbean of the International Labour Office (ILO). Some important contributions include PREALC (1987), PREALC (1990), Tokman (1992a) and Tokman (1995).

<sup>19</sup> See Rakowsky (1994b) and Portes and Schauffler (1993).

<sup>20</sup> For detailed overviews of the many facets of the “underground” approach see Portes, Castells and Benton (1989) and Portes (1995). The explanations here draw mainly on Portes and Schauffler (1993).

market is supposed to reflect the heterogeneous elements of the production structure. At each descending step in the production process, work conditions become more precarious and wage levels lower (Portes, 1995, pp. 36-37).

### *An Alternative View*

In the above account of different views on labour markets in developing economies, the informal sector is seen as an institutionally or structurally disadvantaged sector. Maloney (1998 and 1999) puts forward an alternative view. He argues that the market for relatively unskilled labour may be well integrated. Workers can choose from formal and informal sector jobs offerings exhibiting distinct desirable characteristics. Thus, workers, and not only employers, may prefer unprotected work in order to evade the implicit labour tax of protection. Furthermore, informal work may admit more flexibility and offer training possibilities. Maloney (1999, pp. 276-277) shows the advantages of informal work for three modalities. Self-employment makes workers independent. The opportunity cost of self-employment may be low since productivity and wages of relatively unskilled workers in the formal sector are also low. Informal salaried work may serve as an entry port to employment and as a training stage, especially for young workers. Contract (home-) work may be interpreted as a Pareto-improving arrangement between employers and workers. Thereby, both sides do “not evade the labour legislation per se, but the [implicit] inefficiencies and rigidities.”

### **II.3. Orthodox and Segmentalist Views on Segmentation**

According to neoclassical economics, segmentation denotes different wage-setting mechanisms across and limited mobility between different sectors. Earnings differentials of identical individuals in terms of human capital and preferences can be due to institutional factors, such as the influence of unions or government interventions. Unions may also restrict mobility between sectors by means of “closed-shop” practices. In the context of a developing economy, differential access to education may limit mobility. Geographical and biological factors can also have an impact on both earnings and mobility. The conventional

labour market models described in *The Informal Sector in Labour Market Analysis* incorporate this kind of segmentation. Today, neoclassical labour economics is well equipped with a whole range of theories endogenising wage differentials, such as efficiency wage considerations and insider-outsider models. A labour market with different wage-setting mechanisms in different sectors exhibits job-rationing rather than segmentation. Strictly defined, segmentation also requires limited mobility between segments.<sup>21</sup> Neoclassical labour market analysis provides the means to address limited mobility, e.g. through the introduction of sector-specific human capital. However, the existence of non-competing groups usually bases on assumptions. The static character of this type of analysis limits its analytical scope, in particular with regard to limited mobility.

### ***The Segmentationalist Approach***

In the view of an influential group of US American economists in the 1960s and 1970s, orthodox labour market theory failed to explain the problems of underemployment, poverty, and unequal distribution of labour income. Therefore, they established a theory that divided the American labour market into two segments, in which workers and employers operate due to fundamentally different behavioural rules.<sup>22</sup>

Typically, the labour market is assumed to consist of two segments, the primary and the secondary. The primary sector offers more attractive high-wage jobs with good working conditions, career opportunities, and stability. The secondary sector jobs are inferior and characterised by low wages, bad working

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<sup>21</sup> In development economics, wage differentials are typically considered as a sufficient condition for segmentation. See for example Fields (1980, p. 130). In the models discussed in part *The Informal Sector in Labour Market Analysis*, segmentation occurs with labour perfectly mobile across sectors as a result of government-imposed minimum wages. Based on a precise definition, labour market segmentation is not compatible with perfect labour mobility.

<sup>22</sup> See Gordon (1972, p. 43). The segmentationalist approach can be traced back to John Stuart Mill and to the American institutionalists of the 1940s and 1950s, but segmentation theory became a main concern in labour economics with the writings of the economists cited in this section. For detailed reviews of the theory and evidence, see McNabb and Ryan (1990), Dickens and Lang (1992), or Leontaridi (1998).

conditions, and instability.<sup>23</sup> Theories of the sources of segmentation were developed from different viewpoints.

By some of its proponents, labour market segmentation was primarily thought to be the consequence of a dual industrial structure that is reflected in a segmented labour market. In such a dual economic system, “core” oligopolistic corporations coexist with a “peripheral” competitive capitalist sector.<sup>24</sup> Hence, the labour market consists of a primary segment in “core” industries and a secondary segment in “peripheral” firms. This view on segmentation is very close to a structuralist perception of the labour market. The main element of linking industrial structure and labour market outcomes was the idea of internal labour markets that now has become a standard tool in labour economics. The functioning of internal labour markets implies that wage determination and job allocation in large territories of the labour market are governed rather by institutionalised processes than by market forces (Piore, 1983, p. 251).

Other segmentation theorists, especially Piore, placed emphasis on behavioural and sociological differences as the main reasons for labour market segmentation (Piore, 1973a). Piore (1973b, p. 128) introduces the notion of mobility chains, implying that people from certain sociological strata, i.e. drawn out of a specific range of schools, neighbourhoods, and family backgrounds, are confined to specific types of employment. Berger and Piore (1980, p. 16-17) argue that segments are qualitatively different due to differences in behavioural characteristics and experiences of both workers and employers. Therefore, wage determination, education, and training are fundamentally different in distinct segments.

Vietorisz and Harrison (1973) allow for divergent development in different activities after a shock to the system that leads to wages above and below

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<sup>23</sup> See Berger and Piore (1980, pp. 17-19) for a very detailed description of the characteristics of different labour market segments.

<sup>24</sup> See Edwards, Reich, and Gordon (1973, p. xi). According to Berger and Piore (1982), dualistic structures are due to a division between firms catering for stable or unstable markets. In later works on labour market segmentation, its proponents argued that “core” corporations organized a part of their operations within secondary labour markets, but they maintained the strong link between industrial structure and the segmentation of the labour market. See Gordon, Edwards, and Reich (1982, pp. 200-202).

equilibrium in different activities. The typical neoclassical negative feedback mechanism suggests that high wages in one activity lead to the adoption of labour saving technology, thereby reducing labour demand and wages. If wages are below equilibrium level in another activity, the opposite occurs and wages increase. Positive feedback arises when the system reinforces the effect of the shock instead of pulling it back to equilibrium. For labour saving technology to lead to higher productivity and increasing wages in one type of activities, the quality of the technology shift has to be reinterpreted. Positive feedback requires factor substitution to be, at least partly, irreversible. The labour saving shift in technology has then to be interpreted in a dynamic way, i.e. as innovation and not as moving along the isoquants of a static production function. In the other activity, the applied technologies are adequate. Therefore, no productivity-enhancing innovations are needed and wages stagnate. Vietorisz and Harrison (1973) recognise that divergence alone cannot be a sufficient condition for segmentation. Additionally, mobility has to be limited between labour market segments. This may be due to exogenous factors, such as geographical distance, but they show segmentation to arise as an endogenous phenomenon. Divergence in skills, understood as a whole range of characteristics including education, on-the-job-training, or work norms, results from divergence between labour market segments and reinforces it. These differences become effective barriers to mobility between segments, i.e. higher skill differences lower mobility across segments. The argument can be strengthened by assuming that investment in skills for oneself and for one's children is only possible if high wages are earned. These fundamental tendencies of segmentation are reinforced by "secondary" factors, such as race, gender, and class.

## **II.4. Labour Market Segmentation in Developing Countries – Explaining Vicious Employment Circles**

In this part, we consider a model of a segmented labour market that emphasises educational, training and resulting skill constraints that limit labour market mobility. The model is set up before the structural background of a developing economy.<sup>25</sup> Labour market issues, in particular with regard to Latin America, are commonly addressed under the label of “flexibilisation”, i.e. labour market liberalisation aimed at the reduction of non-wage labour costs, such as mandatory social security schemes and presumably excessive employment regulation (Guasch, 1999, Edwards and Cox-Edwards, 2000). As we have seen above, these labour market institutions are considered in most conventional labour market analyses as the driving force of segmentation. The perception of the labour market put forward in the following suggests that the role of labour market institutions in causing segmentation is typically overemphasised. Divergent developments on the demand-side combined with mechanisms that limit labour market mobility are rather considered as the principal sources of segmentation.

Labour market segmentation is usually defined as being trapped into “bad” jobs (Bosworth, Dawkins and Stromback, 1996, p. 341, Dickens and Lang, 1992, pp. 7-8). As mentioned above, a more precise definition of segmentation identifies two crucial aspects. First, the labour market consists of distinct segments with different wage determination mechanisms and employment policies. Second, mobility between segments is limited. Typically, the labour market is assumed to consist of two segments. “Good” jobs, in which high wages are paid, coexist with low-wage “bad” jobs.<sup>26</sup> Since segmentation postulates the

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<sup>25</sup> It is recognised that the model contains many descriptive elements, which are inherent to a structural approach. Some would even maintain that such a formulation is not a model. Nevertheless, since many of the features of Latin American economies are difficult to be captured or explained by means of standard neoclassical analysis, such an approach is considered to provide useful insights into the economics of a developing country.

<sup>26</sup> Throughout this work we will not be concerned with unemployment. Being trapped in a low-wage job is preferred to unemployment. In very poor countries, poor people generally do not have the option of being unemployed. In such a context unemployment can often be considered a luxury. This is certainly not a general observation that holds at each time at

existence of excess supply for high-wage jobs, it requires some form of wage rigidity. Otherwise, workers from the low-wage sector, who prefer a job in the high-wage sector, would bid wages down until they are equalised in both sectors. In addition, segmentation requires the existence of barriers to mobility between low-wage and high-wage sectors. This is because if labour were perfectly mobile, to get a high-wage job would only be a question of waiting and winning the “high-wage-job lottery”. Thus, empirical evidence of identical individuals with different earnings in different segments does not automatically imply segmentation, as this may be the result of mere rationing due to nominal or real wage rigidities instead.

The view on labour market segmentation put forward in the following goes beyond this perception, which is limited by its static character. As in the model of Vietorisz and Harrison (1973), labour market segmentation is founded in divergent developments on the demand-side. Labour market segmentation results from the dynamic processes that limit labour market mobility. Mobility constraints arise from the negative feedbacks between job experience and later labour market opportunities (Taubman and Wachter, 1986, p. 1196). These constraints may even be transferred across generations.

First, we consider some of the main structural features and developments of a representative Latin American country in the era of globalisation after the experience of almost two decades of structural adjustment and relate them to the presence of different wage-setting mechanisms. Then, we deal with the factors explaining limited labour market mobility. In the last section, the relation between informality and segmentation is clarified.

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each place. It is likely that this generalisation does not even hold for Latin American countries, but in Bolivia open unemployment rates have dropped dramatically in the late 1990s. See Jemio (1999a, p. 26) for Bolivia and Edwards and Lustig (1997, p. 3) for other Latin American economies.

## *Divergent Developments and Different Wage Setting*

A thorough assessment of the structural background would go beyond the scope of this paper, but there are some central issues that have to be taken into consideration in labour market analysis. Whereas one finds technological differences in advanced countries, one observes technological discontinuities in developing economies.<sup>27</sup> These discontinuities result in structural heterogeneity, which has been reinforced by the internationalisation of production and recent technological advances. The new technologies of the service economy are much easier transferred than the technologies of the industrial economy. Capital flows into developing countries, especially in the form of foreign direct investment, facilitate the transfer of technology and know-how, and lift capital constraints. The number of sectors benefiting directly from these opportunities is limited. In human-capital intensive industries, such as banking or telecommunications, and other industries using modern imported real-capital-intensive production technologies, the use of computers and modern information technology has brought about enormous productivity gains. The technology used in other parts of the economy, in particular in SMEs, has not seen major changes, and productivity stagnates.

In the short- and medium-run, these developments will widen the productivity and technological gaps that already exist in heterogeneous production structures. Economic divergence can be observed in many developing countries, although convergence and trickle-down effects hopefully reign in the long run. The consequences divergent development has on people's incomes depend crucially on the workings of the labour market.

The conventional view maintains that structural adjustment increases the production of low-skilled labour intensive goods. Demand for low-skilled labour would increase, and the earnings gap between low-skilled and high-skilled workers would be reduced. The above developments reduce the relative static

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<sup>27</sup> Numerous examples can be given. One can have damaged tyres fixed in a "pit-stop" like service or in one of the primitive stalls, where two or three men use the most basic tools and means (hot water, a hammer, and some gum). In La Paz or Quito, one can shop either in one of the shopping malls, which could have been found in New York or Berlin, or on a typical Andean market where a lot of goods have been carried to by public transport.



gains of the relatively low-skilled, which result from the adjustment mechanism. The dynamic gains of globalisation for the relatively high-skilled in certain sectors may be more important than the static effects. Divergent development on the demand-side would not have to be a major concern, if the supply-side adjusted smoothly, and all people had equal opportunities. In a segmented labour market, labour market mobility is limited to a number of factors that will be reviewed in the following section, and this crucial adjustment mechanism does not work smoothly.

As has been noted above, different wage-setting has been stressed as an essential factor underlying segmentation. It is a widespread view that, what segmentation theory is about, is to prove the existence of a segmented labour market by showing that there are identical individuals in terms of human capital endowment with different wages. In a segmented labour market one may actually find very few identical individuals in terms of human capital in different segments due to the presence of factors limiting skill and, therefore, labour market mobility. Nevertheless, divergent developments, skill divergence, and divergent wages are related to different wage-setting mechanisms. This is because not only productivity increases with higher skills. The more skilled the workforce and the more complex the work process, the higher are monitoring, recruiting and training costs. Therefore, wage-setting mechanisms are correlated with skill levels. Hence, it is likely that one will observe different wage-setting in a segmented labour market, but different wage-setting may well be observed in an efficient, smoothly functioning labour market. Then, these different wage-setting mechanisms cause wage rigidities that imply (price) rationing, but not segmentation. Furthermore, if the above relationship between wage-setting and human capital holds, it will be impossible to decouple the impact of different wage-setting and human capital variables on wages. Taken together, different wage-setting alone is not our major concern. Instead, the point is that having a specific job and the respective skill level is not only a result of a decision about human capital investment and leisure-work combinations, which may be constrained due to government failures. Often, it is the result of being trapped in a job without opportunities of advancement. This is due to a number of reasons that limit labour market mobility.

## *Explaining Limited Mobility*

In general, limited mobility is a result of differential access to resources, such as education, training, and capital. Unequal access to resources is not necessarily a result of a failure of the public sector to provide it but rather of the mechanisms at work in a segmented labour market. In the following, the focus will be on dynamic processes that limit labour market mobility. These processes mainly refer to education and training – both essential in determining productivity.

Education and training are crucial to labour market mobility. The access to educational opportunities is far from being equal to all people, which is especially true for Latin America. The basic requirements for a smoothly working labour market are equal educational opportunities. Otherwise, people are constrained in their labour supply decision, and segmentation arises. Differential access to education and training is often founded in the family background, and is, therefore, closely related to poverty in terms of low family incomes. The educational opportunities of children out of poor families are likely to be limited. It has been noted frequently that, in particular, the access to secondary education is limited for poor people (Rodgers, 1989, p. 13). Secondary education provides many desirable labour market entry points. Educational careers depend on the behaviour at certain entry or decision points, i.e. dropping out of school after primary education may seriously limit future opportunities. There are not only economic reasons that condition opportunities of poor children. It is likely that poorly educated parents will not provide their children with good educational opportunities, even though resources might be available. It is obvious that education is not equivalent to years of schooling. The quality of the educational system is as important as the access to it. Taking into consideration the poor quality of public schools in many developing countries gives a further explanation for limited opportunities of the poor, who cannot afford private schooling. The strength of the relationship between family

background and educational opportunities is seen as one of the main indicators for social mobility, which is closely related to labour market mobility.<sup>28</sup>

Schooling represents only the basis for future skill acquisition. Often, further important labour-market relevant skills are acquired in SMEs through experience or training on the job. The quality of on-the-job training is critical in determining labour market mobility.<sup>29</sup> “Good” informal training may open some employment opportunities, whereas “bad” training may seriously limit labour market mobility. Informal training can be beneficial and may enable people to enter successful self-employment. In contrast, if young people, who have just finished primary school, enter SMEs, the process of accumulating skills is likely to slow down or even stop. Such “bad” informal training is likely to be the rule. Training and skill transfer are severely restricted by the often limited know-how of the employer. Theoretical technological aspects are not covered. Knowledge about how to set up an own enterprise is likely not to be transferred. Due to the high fluctuation rates in SMEs, the interest of the employer lies rather in the apprentice as a cheap source of labour than in building up human capital for the firm.<sup>30</sup> In general, skill transfer is not considered a central task of the entrepreneur or other workers in SMEs. Taken together, the low quality of learning on the job limits skill mobility and therefore, labour market mobility. Low incomes that limit educational opportunities and “bad” on-the-job training can be interpreted as elements of vicious circles, which work across generations.

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<sup>28</sup> Andersen (2000) investigates social mobility in Latin America. The literature on social mobility, income mobility, or educational (skill) mobility is of particular use in our analysis, since all these indicators are closely related to labour market mobility and segmentation. Educational (skill) mobility represents one of the causes of limited labour market mobility. Both income mobility and social mobility can be interpreted as consequences of labour market segmentation.

<sup>29</sup> The view that employment quality matters is supported by insights from growth theory. On-the-job training has been recognised as an essential component of human capital. Lucas (1993, p. 270) finds that, although relatively little is known about different types of human capital accumulation, learning on the job seems to be “by far the most central”.

<sup>30</sup> See Lohmar-Kuhnle (1997, p. 160). The ILO (1998, p. 207) remarks with regard to informal training that although the “informal apprenticeship system” has proved to be effective in transmitting skills there is much scope for improvement of this system. The lack of new techniques and resources leads to the acquisition of a low standard of skills.

A related aspect is the role of sociological factors in limiting labour market mobility. In his study of the Guatemalan labour market, Funkhouser (1997, p. 358-359) stresses the importance of community ties or neighbourhood networks as having important effects on labour supply decisions and, therefore, on labour market mobility. This opinion is based on the observation that the labour market outcomes across family members are highly correlated. Thus, people are attached to a certain labour force. A somewhat similar conclusion is drawn by Wial (1991), whose results base on interviews with workers and employers. He emphasises the importance of socialisation processes into extended families and communities that underlie workers' perceptions of jobs, search methods, and skills. Against this sociological background, workers perceive human capital variables as unimportant for getting a "good" job, but they stress luck and contacts. On the presumably less subjective employer side, the study reveals that this perception is a "reasonable abstraction" of the reality of employment decisions (Wial, 1991, p. 413). Hence, kinship and community ties, i.e. sociological factors, play an important role in limiting labour market mobility.

In labour markets, in which self-employment constitutes an important employment alternative, mobility is also limited by restricted access to complementary production factors (Rodgers, 1989, p. 13-14). Access to capital is limited for large parts of the population in developing economies. Many people do not have access to formal credit for a number of reasons, such as the lack of a collateral, the small amount of credit needed, or the difficulties to prove the existence of a well-functioning business that is neither registered nor documented in any formal way. The restricted or complicated access to legal institutions, such as registration processes or contract enforcement mechanisms, aggravates setting up shop or expanding existing activities (de Soto, 2000). Further restricting factors are limited market access to sell self-employment output, i.e. the lack of viable locations, and the dependence on very few markets and distributions channels.

Personal characteristics such as gender, race, religion (or caste), and accent certainly have a decisive function in determining a person's access to specific jobs (Khandker, 1992, p. 20). If an employer's decision to hire someone is based

on these criteria, it is referred to as discrimination. Although segmentation can also arise from discrimination, it is not the major concern here.<sup>31</sup>

### ***Relating Informality and Segmentation***

If the above mobility-limiting mechanisms and the demand-side driven divergence are the main factors underlying segmentation, many of the characteristics, typically used in theoretical and empirical analyses to identify informal employment as a labour market segment, may not be adequate descriptive notions for segmentation as it is probably found in developing countries. How do the dimensions of informality, identified in part *Dimensions of Informality – Solving Definitional Problems*, fit into the above perception of labour market segmentation? In the following, some of the conventional hypotheses about the relationship between informality and segmentation are challenged.

Ease of entry in terms of low human or real capital requirements is a criterion that would characterise the lowest segments of the labour market. Nevertheless, ease of entry is difficult to measure empirically due to the many possible requirements involved. One of the seemingly most important requirement in developing countries, entrepreneurial skills, cannot be captured empirically. The prevailing segmentation in the labour market would be related to the enterprise size. Yet, this would only be the case if the size of the firm were correlated to the quality of employment. The existence of such a general correlation is questionable, as it may well be that in certain activities, such as the garment industry, the quality of employment in terms of training and additional skill acquisition is “better” in small-sized firms. In contrast, the technology of production might be a good indicator for segmentation in the labour market. This is evident if one distinguishes distinct technologies according to their skill-intensity. The legal status of the firm should not be used as a descriptive notion for segmentation, as it mainly depends on the prevailing legislation with regard to small-sized firms.

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<sup>31</sup> Discrimination is of particular importance in the analysis of Latin American labour markets. The traditional role of women as a housewives is far more accentuated than in advanced countries. This has serious implications for employment decisions and wages. Ethnic diversity is a feature of many countries, and racism often a problem.

Employment categories may reflect segmentation to a certain extent, as white-collar workers are more likely to hold “good” jobs than other occupational groups. In contrast, domestic employees might be considered as a group, for which vicious educational and skill circles work very forcefully. Yet, there may be important differences within certain groups, in particular within the self-employed.

Whether or not “formal” protection, i.e. the participation in mandatory health insurance or pension schemes or being covered by labour legislation, is related to segmentation in the labour market, depends on the country-specific characteristics of these labour market institutions. In order to obtain a better understanding of the role of these institutions, it is useful to differentiate between segmentation and distortion.<sup>32</sup> What matters for the degree of distortion caused by social security contributions, is the gap between the costs incurred by the employer and the workers’ benefits, which might be interpreted as a tax on labour. The higher this gap and the number of employees covered, the more serious the distortionary character of the system. The degree of segmentation caused by social security systems does not coincide with the degree of induced distortion. The argument can be best illustrated by two examples. If a social security system with a sound cost-benefit relation covers only a small fraction of the workforce with high earnings, it reinforces segmentation, although it is not distortionary. Both the costs and the benefits are too high for fulfilling the basic goal of social security schemes, namely to provide universal protection. In this case, the already vulnerable poor are excluded from important risk-management devices, which is why such a system reinforces vicious poverty circles.<sup>33</sup> The underlying motive of the poorer people not to participate in the scheme is that the share of their income, that they are willing to save for retirement or pay for health, is smaller than the corresponding share of the richer people. If the cost-

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<sup>32</sup> It is recognised that segmentation could be interpreted as a particular type of distortion, since it implies inefficiencies. Nevertheless, the distinction is found to be helpful in this paragraph.

<sup>33</sup> Poverty is often perceived not only as a state of having little but also of being vulnerable to lose the little one possesses. Vulnerability involves exposure to external shocks, stress, and risk as well as the lack of means to cope with these external threats (Kanbur and Squire, 2000, p.205).

benefit relation is not sound, and the coverage also low, the social security scheme may be distortionary, but not cause major segmentation. Due to the gap between benefits and costs, distortions arise. Nevertheless, the impact on segmentation is limited, since it does not make a major difference whether or not one is covered by the system. Taken together, coverage by mandatory social security schemes cannot be considered as a general indicator of segmentation. With regard to employment protection laws, their role in causing segmentation is not as obvious as typically assumed, since it depends on the actual degree of enforceability. Only if such legislation favours a group already holding “good” jobs and excludes another group, it reinforces segmentation. It is possible that circumvention of stringent labour protection laws is a widespread phenomenon throughout the private sector in many developing countries, and not restricted to small-sized firms working beyond regulation.

The next step is to interrelate some of the above dimensions on the basis of the segmentation model. As has been mentioned before there may exist a positive correlation between enterprise size and employment quality, but employment in registered large-sized enterprises might be fairly unstable and unprotected. The same objection can be made with regard to salaried work versus self-employment. Successful self-employment can involve effective protection and a stable job, whereas many salaried workers’ jobs do not show these characteristics. Ease of entry is probably closely related to unsuccessful self-employment. Family workers and domestic employees might not face severe entry barriers.

### ***Preliminary Remarks***

The perception of the labour market put forward in the preceding sections could be complemented by many other factors with regard to informality and segmentation, but the purpose of this part is rather to put emphasis on other than institutional factors in causing labour market segmentation, and not to construct a detailed labour market model. How the “microeconomics” of different wage-setting and limited mobility fit into the above model can be a fruitful area for future theoretical and empirical research. Despite its elementary and descriptive character, the model suggests that empirical analyses of segmentation should be

rather concerned with limited mobility than with the existence of different wage-setting mechanisms. In order to address mobility empirically, data on employment and educational careers would be needed. The central message of the above model is that people may be trapped in jobs with low earnings, which may result in poverty. They face serious educational and training constraints, which are closely linked to employment and not primarily to deficient “exogenously provided” education. These constraints function across generations within families. Thus, the main sources of labour market segmentation are differences in the quality of employment, i.e., in particular, the quality of learning on the job, and vicious educational circles grounded in the sociological or family background. Furthermore, the structure and the segmentation patterns of the labour market do not correspond to the typically assumed formal-informal dichotomy. The following chapter, which deals with the Bolivian labour market, will present empirical studies and descriptive statistics that support some aspects of the above labour market perception.

## **II.5. A Closer Look at the Supply-Side**

Some important factors on the labour-supply side have been neglected so far. This part will review these supply-side factors. Demographic developments and female labour participation have to be taken into account when labour market outcomes are analysed. Other principal supply-side factors, education and training, have been the focus of the discussion so far.

In two recent contributions, Duryea and Székely (1998 and 2000) have looked at the development and changes in labour supply in Latin America. They argue that the supply-side has been neglected in labour market analyses with regard to Latin America. Demographics and education are found to add to the demand and institutional explanations of labour market outcomes, i.e. rising inequality, overall decline in employment, and changing patterns of unemployment and underemployment.<sup>34</sup> Although these studies provide interesting and useful information about the demographic transformation and educational trends, the viewpoint that these factors “add” to the understanding of

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<sup>34</sup> See Duryea and Székely (2000, p. 199).



the labour market, has to be modified. Such an interpretation of supply-side factors implies that these factors are exogenous. Demographic changes, labour market participation and education, on the one hand, and economic growth, structural change, employment opportunities, poverty and inequality itself, on the other hand, are too closely interrelated to assume the exogeneity of changes in the former. Nevertheless, in labour market analysis, we might assume exogeneity of demographic changes and changes in female labour participation. With regard to education this assumption cannot be accepted. This has become clear, when we considered the explanations of limited labour market mobility above. This is not to say that the supply-side does not matter. It is to say that the size and quality of the workforce is not simply a result of a long-term “natural” demographic law (that may be recognised to be rooted in progress in health and sanitation and economic growth) and the provision of educational facilities. The factors explaining the size and quality of the workforce are far more complicated, and segmentation theory yields valuable insights concerning these factors, especially with regard to education. Despite these objections, the results presented by Duryea and Székely (2000, pp. 226-227) are of major importance to the analysis of Latin American labour markets.

### **III. INFORMALITY AND SEGMENTATION IN THE BOLIVIAN LABOUR MARKET**

In this chapter, a detailed analysis of the characteristics and *modi operandi* of the Bolivian labour market will be carried out. According to the Interim PRSP of the Bolivian authorities, more than 600 000 Bolivians are estimated to “work in informal urban establishments under precarious conditions, with uncertain income, a lack of social security and long working hours” (Bolivia, 2000, p. 8). This chapter aims at a more differentiated view on the structures and the degree of informality in the country’s labour market. In addition, evidence will be presented that supports the perception of a segmented labour market, as introduced in part

## Labour Market Segmentation in Developing Countries – Explaining Vicious Employment Circles.

In the first part, we are concerned with the dimensions of informality, as far as the available information allows for their identification in the Bolivian labour market. In the second part, we will review empirical work on the complex relations between incomes, poverty, and employment. The third part refers to institutional aspects of the Bolivian labour market and reviews recent reform efforts.

### **III.1. Informal Dimensions in the Labour Market**

The presence of an informal sector, however defined, is not a recent phenomenon. The new industries created in the course of the modernisation strategy, which was launched in Bolivia in the 1950s, did not provide enough employment for the rural population migrating into Bolivia's urban centres. As a result of the fast process of urbanisation, which accompanied the structural change, by 1950 about 30 percent of the population lived in urban areas and by 1976 about 40 percent. Today, the ratio amounts to about 65 percent.<sup>35</sup> A series of adjustment measures, applied since 1985, have been transmitted to the labour market.<sup>36</sup> It is often claimed that, due to the implementation of these structural adjustment policies, Latin American labour markets have undergone a process of “informalisation” throughout the 1980s and 1990s. Labour has moved out of regular salaried employment in “modern”, often state-owned, firms into self-employment or employment in SMEs, where people frequently work under precarious conditions.<sup>37</sup> Some of these trends can be observed in the Bolivian labour market.

In this part, we apply the framework of informality dimensions to the Bolivian labour market. Some of the dimensions identified in part Dimensions of

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<sup>35</sup> Rural-urban migratory flows intensified during the crisis years from 1980 to 1985. Santa Cruz' population grew at an annual rate of 10, 2 percent between 1980 and 1985. See Casanovas (1987, p. 152) and World Bank (2000b, p. 67). According to the World Bank, the urban population is estimated to make up more than 70 percent by 2015.

<sup>36</sup> For details of adjustment in the Bolivian case see, for example, Sachs and Larrain (1993).

<sup>37</sup> See Infante and Klein (1991) for the 1980s and Weller (2000) for the 1990s.

Informality – Solving Definitional Problems cannot be traced statistically. Ease of entry, e.g., is related to a number of factors of which only some can be addressed. Production technologies are also difficult to measure, especially in small-scale enterprises without documentation. In the following section, we will concentrate on the enterprise characteristics, such as size, organisation, and legal status. The next section deals mainly with employment-related dimensions, but it also tries to link distinct dimensions, e.g. employment categories and enterprise size. The possibilities to combine different dimensions are limited due to lacking data. Almost all descriptive statistics and cited empirical studies are based upon household and employment surveys, which have been conducted frequently since 1985, mainly in urban areas of Bolivia. Some information on enterprise characteristics is also available thanks to a survey carried out by INE (Instituto Nacional de Estadísticas) in 1992.<sup>38</sup>

### ***Enterprise-Related Dimensions***

Studies about the Bolivian labour market usually differentiate between five sectors: the public, the business, the semi-business, the family-business and the domestic service sector. The informal sector includes the semi- and family business sectors. The semi-business sector is characterised by the participation of the owner in the production process instead of delegating these functions to salaried personnel. In family businesses, work is organised exclusively around an independent worker, who is carrying out an activity with or without the support of family members.<sup>39</sup> In some cases, domestic services are also considered informal. The formal sector includes the business and the public sector.

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<sup>38</sup> Before we enter into a more detailed discussion of the Bolivian labour market, it should be noted that the following observations neglect two factors that play a crucial role in determining labour market outcomes – age and gender. Both lead to significant differences in the employment structure. To illustrate these differences would go beyond the scope of the study, but these limitations should be borne in mind.

<sup>39</sup> See Arze et al. (1993, p. 66).

**Table 1 — Formal and Informal Employment, 1976-1999, in Percent**

	1976	1980 <sup>a</sup>	1985	1990	1995	1999
<b>Formal Sector</b>	<b>43</b>	<b>42</b>	<b>40.8</b>	<b>36.4</b>	<b>31.5</b>	<b>41.6</b>
Public	26	24	24.8	16.7	13.1	10.4
Business	17	18	16	19.7	18.4	31.2
<b>Informal Sector</b>	<b>47</b>	<b>53</b>	<b>54</b>	<b>55.7</b>	<b>63</b>	<b>58.1</b>
Semi-business	15	17	18.2	15.3	22.4	20.1
Family	32	36	35.8	40.4	40.6	38
<b>Domestic service sector</b>	<b>10</b>	<b>5</b>	<b>5.2</b>	<b>7.9</b>	<b>5.5</b>	<b>0.3</b>

<sup>a</sup> Data for 1980 refers to La Paz only.

Source: Casanovas (1987, p. 155), Arze et al. (1993, Table III.20), Arze (1997, p. 58), INE (2000), based on INE household surveys from different years.

The figures in Table 1 indicate that there has been a tendency towards an increasing share of informal employment in total employment, at least in the first half of the 1990s on the basis of this informal sector definition. Public employment declined significantly, whereas the share of private formal sector employment has remained relatively stable throughout the first half of the 1990s. Between 1995 and 1999 formal business sector employment has experienced a notable increase, and accounts by the end of the 1990s for almost a third of total employment. Nevertheless, SMEs seem to play the principal role in employment creation for the fast growing labour force with a share that had increased to 60 percent by 1995, and has remained at this high level. The Bolivian Interim PRSP asserts that employment has increased, with formal employment having risen by 7.7 percent and informal employment by 5.1 percent annually between 1990 and 1997. Unemployment fell from 7.3 percent to 4.4 percent during the same period.<sup>40</sup>

<sup>40</sup> See Bolivia (2000, p. 8). These figures of the PRSP include urban and rural areas.

Another interesting view on employment can be obtained from the survey on economic establishments (INE, 1992). Table 2 shows that there is a large number of small establishments, which account for an important share of employment. This share might even be higher than the figures suggest since it is likely that such surveys are biased against small enterprises. Microenterprises are often mobile. Other enterprises do not want to be recorded statistically, since their work is clandestine. These facts would explain why the surveyed establishments account only for about 50 percent of employment. Therefore, Table 3 shows the same statistics based on INE household data from 1999. Large-sized firms account only for a small fraction of employment in Bolivia.

**Table 2— Size of Establishments and Employment, 1992,  
Based on Survey of Economic Establishments**

		Number of People Employed					
	Total	1-4	5-9	10-24	25-49	50-99	100 or more
Number of Firms	118 428	102 383	8753	4598	1615	637	442
Share in %	100	86.45	7.39	3.88	1.36	0.54	0.37
People Employed	550 351	190 621	54 977	69 574	54 377	42 843	137 959
Share in %	100	34.64	9.99	12.64	9.88	7.78	25.07

Source: INE (1992), own calculations.

**Table 3 — Size of Establishment and Employment, 1999, Based on Household Data**

		Number of People Employed						
	Total	1-4	5-9	10-19	20-49	50-99	100 or more	NR <sup>a</sup>
People Employed	2 030 023	1 299 602	174 530	114 265	109 250	119 821	179 597	32 958
Share in %	100	64.0	8.6	5.7	5.4	5.9	8.8	1.6

<sup>a</sup>Does not know or does not respond, or concept not applicable.

Source: INE (1999), own calculations.

The survey of economic establishments also provides figures referring to the legal status of the entities. Only 28 percent are registered with the ‘Registro Único de Contribuyentes’ (“RUC” – Single National Register of Taxpayers), i.e. as taxpayers, and 2.8 percent with the national health insurance system.<sup>41</sup> In contrast, Casanovas (1992, p. 33) finds that the coverage of potential taxpayers in the informal sector amounts to about 50 percent although with significant sectoral and regional differences. If the coverage is really that high, which cannot be confirmed due to the lack of data with regard to enterprise characteristics, it may be explained by a major tax reform implemented in 1986. The reform simplified taxation procedures, especially with regard to SMEs. A special simplified tax was designed to address “very small enterprises operating in the informal sector” (Thirsk, 1997, p. 47). These establishments are excluded from all other taxes paying instead a presumptive tax on capital and income. The complicated computational exercises are carried out by the tax authorities. This simplified tax regime does not require bookkeeping on behalf of the taxpayer.<sup>42</sup> Although the number of taxpayers doubled due to the reform, the above figures

<sup>41</sup> See INE (1992). These figures have to be treated with caution since the majority of establishments do not provide information with regard to its registration status.

<sup>42</sup> For details of the simplified tax regime, its coverage and the characteristics of the enterprises registered with it, see Casanovas (1992, pp. 31-33).

indicate that success has been limited. Paying these taxes is only one aspect of formalisation. Other legal requirements are the payment of municipal taxes, such as rental obligations and fees, and the registration with the National Register of Commerce (Registro Nacional de Comercio) and/or with the Register of Small-scale and Crafts Industries (Registro Nacional de Pequeña Industria y Artesanía). The costs of legal constitution depend on the sector and the size of the establishment. They vary between US\$50 and US\$100. It takes about one month to fulfil all legal requirements. This seems fast and cheap compared to the “horror stories” of registration procedures recorded by de Soto (2000, p. 15) for other developing economies. In Peru, it took the researchers of the ‘Instituto de Libertad y Democracia’ 289 days and US\$1231 to register a small business. With regard to operational costs, the tax obligations to the national government or municipalities involve important burdens for SMEs in Bolivia, but they are not excessively high. In his analysis of the costs of legality, Casanovas (1992, p. 53) concludes that the most important obstacle to completely legal operation are the additional labour costs, induced by labour laws and social security contributions. Even if the enterprise is registered and pays taxes, labour relations will often be unregulated.

### ***Employment-Related Dimensions***

A stylised fact about employment in many developing economies is the importance of self-employment and of employment in SMEs. Employment surveys differentiate between different employment categories illustrated in Table 4 for 1995 and Table 5 for 1999. These tables relate the employment categories with the size of the establishment where a person works. In 1995, more than 60 percent of the blue-collar workers and more than 45 percent of the white-collar workers were employed in small enterprises with less than 20 people employed. Jemio (1999a, p. 35) finds that the share of salaried employment in large-sized firm with more than 30 workers has risen from about 15 percent in 1985 to about 40 percent in 1996. This trend of a rising share of employment in large-sized firms does not seem to have continued during the second half of the 1990s. It should be noted that an important share (one fifth) of family workers is

employed in establishments that employ between 5 and 19 persons implying that these are not pure family enterprises.

**Table 4 — Occupational Category According to the Size of the Establishment, 1995**

		Number of People Employed			
		1–4	5–19	20 or more	NR
Total employed (in 1000)	1256.58	694.24	214.28	257.61	90.44
Share in %	100.00	55.25	17.05	20.50	7.20
Occupational Category	Share of Total Employed in %	Share in %			
Blue-collar worker	16.12	30.73	32.79	33.38	3.11
White-collar worker	30.10	23.10	23.91	48.88	4.10
Self-employed	29.20	98.89	1.11	0.00	0.00
Employer	7.79	68.57	26.36	5.07	0.00
Family worker	10.45	78.93	20.98	0.10	0.00
Independent professional	0.87	100.00	0.00	0.00	0.00
Domestic employee	5.40	0.00	0.00	0.00	100.00
NR	0.06	0.00	0.00	0.00	100.00

Source: INE (1995), own calculations.



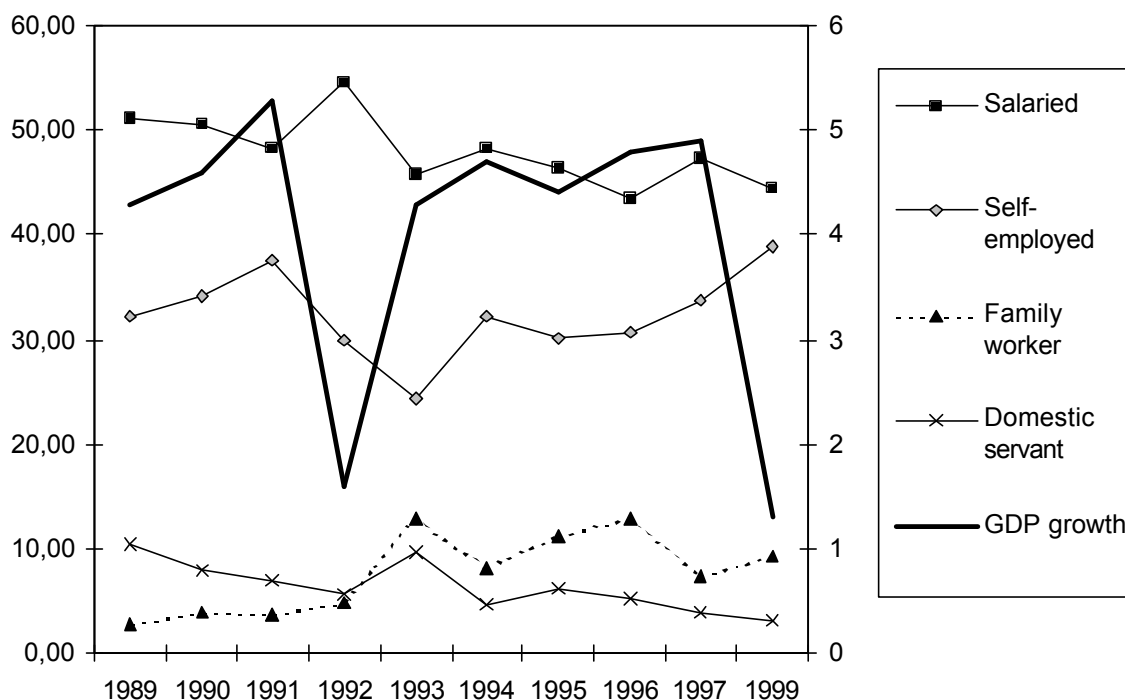
**Table 5 — Occupational Category According to the Size of the Establishment, 1999**

		Number of People Employed			
		1–4	5–19	20 or more	NR
Total employed (in 1000)	2030.023	1299.602	288.795	408.668	32.958
Share in %	100	64.0	14.2	20.1	1.6
Occupational Category	Share of Total Employed in %	Share in %			
Blue-collar worker	10.2	43.3	26.5	27.8	2.5
White-collar worker	34.2	24.7	22.3	49.0	4.0
Self-employed	38.9	97.4	2.6	0.0	0.0
Employer, who receives remuneration	1.3	46.1	34.3	19.6	0.0
Employer, who does not receive remuneration	2.9	63.1	31.4	5.6	0.0
Cooperative worker	0.2	61.4	15.3	23.3	0.0
Family worker	9.2	83.2	16.0	0.8	0.0
Domestic employee	3.1	100.0	0.0	0.0	0.0

Source: INE (1999), own calculations.

Figure 1 shows the development of the shares of the different occupational categories in employment and GDP growth from 1989 to 1999. It should be noted that the interpretation of aggregate employment data in this case is highly problematic. Nevertheless, the illustration may allow for the general conclusion

**Figure 1 — Share of Employment Categories in Employment and GDP Growth, 1989-1999, in Percent**



that the composition of the workforce experiences particularly strong change, when the economy leaves a stable growth path of 4 to 5 percent annual GDP growth. Throughout the 1990s, the share of salaried work has declined but not, as one might have expected, in favour of more self-employment but rather in favour of increased employment in family enterprises. The share of self-employment is highly volatile rising to almost 40 percent in 1991 and falling to roughly 25 percent in 1993. A lot of this volatility may be contributed to data deficiencies. Relating GDP growth to developments in employment, it should be borne in mind that the survey results are for different months.<sup>43</sup> From 1992 to 1993, even the total number of self-employed decreased. This might be interpreted, in the light of slow growth in 1992 and recovering in 1993, as confirming the view of some self-employment having a buffer function during economic slowdowns. The same conclusion may be drawn with regard to the increase in self-employment by the end of the decade. Conversely, a look at

<sup>43</sup> The 1989, 1991, 1992 surveys were conducted in November, the 1990 survey in September, the 1993 and 1994 surveys from June to December and the 1995 survey in June.

Figure 1 may also lead to the presumption that self-employment behaves procyclically. The labour market perspective from part would be consistent with both observations. Whereas easy-entry tertiary self-employment would expand during economic slowdowns, since poor families increase their labour supply, secondary and primary self-employment would decline. Hence, the figures may indicate that some self-employment exhibits easy entry.

The heterogeneity of self-employment becomes also evident by looking at the type of establishment, i.e. where and how the self-employed carry out their activities. These characteristics of self-employment are shown in Table 6. We can assume that more than two thirds of the activities performed by self-employed involve a significant investment for buying or renting a location or a mobile stall, transforming the own dwelling or buying a vehicle. Taking into account this information, it is doubtful to regard self-employment as the free-entry sector of the informal economy.

**Table 6 — Type of Establishment of the Self-Employed, 1995**

<b>Type of Establishment</b>	<b>Number of Self-Employed</b>	<b>Share in %</b>
Total	367.0	100.00
Exclusive location	73.4	19.99
Part of dwelling house	68.0	18.53
Fixed stall	38.0	10.36
Mobile stall	67.1	18.29
Mobile vendor	33.5	9.14
Vehicle	19.8	5.41
Domestic service	48.7	13.27
Other	18.4	5.01

Source: INE (1995).

### *Degree of Protection, Regulation and Stability*

The following figures drawn from different household surveys between 1989 and 1999 indicate that the situation of the majority of workers is precarious. They are highly vulnerable, i.e. protected against risks only by family institutions. The subsequent paragraphs deal with coverage issues. The details of institutional and legislative aspects will be the subject of the third part of this chapter. When we consider the issues of regulation, protection, and stability, it is useful to distinguish between the self-employed, family workers and domestic employees, on the one hand, and salaried workers, on the other hand.

In 1999, 16.1 percent of the self-employed, 10.2 percent of the family workers, and 6.9 percent of the domestic employees were affiliated with a health insurance.<sup>44</sup> The situation with regard to pension schemes is even worse for these groups of workers. 98.6 percent of the self-employed, and all family workers and domestic employees lacked retirement insurance.

Salaried work is based on a contract between employer and worker. The Bolivian employment statistics differentiate between permanent and temporary contracts. Table 7 shows that there has been a trend towards less permanent employment after the implementation of the adjustment measures. Among blue-collar workers, temporary employment relations are much more prevalent than among white-collar workers. This does not mean that these contracts are formal in the sense of being covered by enforceable labour legislation.<sup>45</sup> In Bolivia, employment contracts do not have to be written contracts. For an employment relation to involve all the legal requirements, from employment protection to mandatory social security participation, the only prerequisite is an employment relationship that lasts for at least three months. Casanovas (1992, p. 51) notes that small informal enterprises usually circumvent formal labour relations and the associated costs. This can be done by avoiding recruitment of permanent

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<sup>44</sup> Figures from INE (1999), own calculations. These percentages imply only a very slight improvement throughout the 1990s. In 1992, 15 percent of the self-employed, 9 percent of the family workers, and 4 percent of the domestic employees were affiliated to some health insurance.

<sup>45</sup> Some authors seem to assume that permanent contracts as found in the Bolivian statistics imply formality in the employment relationship. This is not compatible with the findings on other characteristics, such as social security coverage. See Weller (2000, p. 47).

workers and recruiting temporary labour instead, by not fulfilling all of their legal obligations based on a verbal agreement between employer and worker, or by permitting an important degree of flexibility in the work relation, e.g. by allowing for home work.

**Table 7 — Type of Employment Contract, Trends from 1985 to 1995, in Percent**

	1985	1989	1992	1995
<b>Dependent Workers Under Permanent Contract</b>	89.2	70.3	78	74.7
Blue-collar workers	N/A <sup>a</sup>	54.2	N/A	N/A
White-collar workers	N/A	75.6	N/A	N/A

<sup>a</sup>not available

Source: Arze at al. (1993, Table II.24) and INE (1995).

An adequate indicator for the lack of formal employment relations is not the employment contract itself, but rather the lack of other mandatory elements of a formal relation, such as health insurance and pension fund schemes. The existence of a permanent employment contract, may it be written or not, does not necessarily imply that the employee benefits from protection mechanisms, such as labour rights and social protection schemes. As Table 8 indicates, in 1999, more than 80 percent of blue-collar workers and 54.5 percent of white-collar workers lacked health insurance. About 17 percent of blue-collar workers were affiliated with a pension fund, whereas the affiliation rate of white-collar workers amounted to almost 50 percent. In the course of the 1990s, affiliation rates with the pension funds have risen, whereas less salaried workers are health-insured.<sup>46</sup> These are the trends that would be expected due to the characteristics

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<sup>46</sup> In 1992, 72.3 percent of the blue-collar workers and 42.3 percent of the white-collar workers had no health insurance. The participation rate in pension fund schemes was 12.6 percent for blue-collar workers and 42.2 percent for white-collar workers in 1994. Figures from INE (1995).

and reforms of the social security systems. A more detailed analysis of these systems would go beyond the scope of this paper.

**Table 8 — Social Security Coverage According to Firm Size, Salaried Employment, 1999, in Percent**

			Share in %	Number of People Employed				
				1-4	5-19	20-49	50-99	100 or more
<b>Affiliated with a Pension Fund</b>	Blue- collar worker	Yes	16.8	1.3	3.0	21.2	51.7	73.2
		No	83.2	98.7	97.0	78.8	48.3	26.8
	White- collar worker	Yes	46.4	4.8	25.2	49.6	78.5	83.8
		No	53.6	95.2	74.8	50.4	21.5	16.2
<b>Affiliated with Health Insuranc e</b>	Blue- collar worker	Public	15.3	6.6	1.6	28.7	13.5	57.5
		Private	4.2	3.5	1.2	1.0	8.2	13.6
		None	80.5	90.0	97.3	70.3	78.3	28.8
	White- collar worker	Public	37.6	10.7	27.6	40.5	52.5	62.9
Private		7.9	4.3	8.4	10.3	8.5	10.0	
		None	54.5	85.0	64.1	49.1	39.0	27.1

Source: INE (1999), own calculations.

Although affiliation rates with social security schemes are correlated with firm size, holding a job in a large-sized firm does not necessarily imply protection through health insurance or pension schemes. As shown in Table 8, informal employment relations make up an important share even in enterprises with more than 100 employees. This finding confirms the view of Klein and Tokman (2000, p. 17), who find the circumvention of formal labour contracts not limited to the small firms in the informal sector. They suggest that there is important legal evasion and employment of not-registered workers in formal sector firms (in terms of size and legal status) as well, although this phenomenon of clandestine workers, who are paid in cash, is almost impossible to verify.

The longer people have stayed at a workplace, the higher are social security affiliation rates, rising above 50 percent in the case of health insurance for salaried employees who have worked at least two years in the same job. These figures indicate a high degree of informality in salaried employment relations and its strong interrelatedness with employment stability.

Another tendency observed in many Latin American labour markets is the trend toward less unionisation due to the diminishing share of employment in large-sized enterprises (Klein and Tokman, 2000, p. 26). This trend is also observable in Bolivia. The share of union blue-collar workers declined from 24 percent in 1989 to 13.3 percent in 1994. In the case of white-collar workers, this decline was even more drastic, from 57 percent to 32.3 percent during the same period.<sup>47</sup>

The general observation that adjustment programs in Latin America have led to an “informalisation” of employment can be confirmed for the Bolivian case. The share of employment in SMEs has risen significantly since 1985 although this development might have slowed down throughout the 1990s. Employment in these enterprises or self-employment is not covered by social protection. Consequently, most workers are highly vulnerable. Informality in the employment relation is certainly related to the size but not necessarily to the legal status of the enterprise. The operation of enterprises beyond regulation due to

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<sup>47</sup> Figure from INE (1995), own calculations.

legal obstacles, its causes, and its consequences do not seem to be a major issue in Bolivia.

### **I.1. Employment, Incomes, and Poverty — Vicious Circles in a Segmented Labour Market?**

This part presents evidence and empirical studies that support the segmented labour market view developed in part, which emphasises limited labour market mobility due to the existence of educational and employment-related vicious circles. What is the evidence for segmentation that we expect the empirics to show? Divergent developments on the demand-side are translated by a segmented labour market with mobility barriers into rising income inequality. Whereas the earnings of some groups increase significantly, the earnings of other groups tend to stagnate or increase at a much lower pace. Earnings functions of different groups should differ. The characteristics and the quality of employment should have explanatory power for earnings differentials. These characteristics should not correspond to the typically assumed formal-informal dichotomy, such as protected salaried versus unprotected self-employed workers. If earnings differ due to differences in employment quality, this finding would indicate that learning on the job is important. Then, employment-related vicious circles might be present. Furthermore, mobility would be limited due the sociological and family background.

In the first section, some important trends and tendencies in labour incomes are demonstrated. We deal with earnings function estimates and outline the methodological difficulties. In the second section, we review empirical investigations on the Bolivian labour market and poverty. Studies examining the determinants of poverty are reconsidered, and the complex nature of poverty analyses addressed. The empirical review concludes with studies on social mobility, which focus on the relation between sociological variables and educational opportunities.



### *Labour Incomes: Trends and Determinants*

The following descriptive statistics give an idea of the development of incomes of certain groups in the Bolivian labour market throughout the 1990s. Jemio (1999b, pp. 21-24) finds divergent trends in labour incomes between skilled and non-skilled workers. Between 1985 and 1996 he shows real wages of skilled workers to have risen by 302.4 percent and of non-skilled workers by 156.1percent.

Table 9 shows the development of labour incomes by educational attainment from 1989 to 1996. The incomes for groups with lower educational attainments stagnated or even decreased, whereas incomes for groups with higher levels of education increased by approximately 30 to 50 percent.<sup>48</sup>

**Table 9 — Average Monthly Income by Educational Attainment, in 1989 Bolivianos, 1989-1996**

<b>Educational attainment</b>	1989	1993	1996	Variation 1989-1996 in %
No schooling	103.3	162.0	154.3	48.4
Basic	258.4	252.4	247.0	-4.4
Intermediate	303.1	235.2	224.2	-26.0
Secondary	263.5	291.1	297.7	13.0
Technician	358.9	361.9	463.1	29.0
Normal	202.3	292.4	286.6	41.7
University	763.0	1127.4	1136.2	48.9
Average	325.5	365.5	387.9	19.2

Sources: INE (1995), INE (1997), taken from Jemio (1999a, p. 38).

The look at the evolution of labour incomes of the different occupational groups, which is illustrated in Table 10, also yields interesting insights. The

<sup>48</sup> The significant increase of incomes of the group with no schooling is likely to be due to statistical deficiencies, since this group represents only a very small share of the sample.

average income of the self-employed and the domestic employees declined until 1996, blue-collar workers' incomes stagnated, whereas the average incomes of white-collar workers and employers grew significantly. The significant increases of real incomes of the domestic employees as well as of blue-collar workers has to be interpreted against their significantly falling share in employment leaving probably only the better paid jobs.<sup>49</sup>

**Table 10 — Average Monthly Income by Occupational Category, in 1989 Bolivianos, 1989-1999**

<b>Occupational Category</b>	1989	1993	1996	1999	Variation 1989-1999
Blue-collar worker	251	244	250	318	26.9
White-collar worker				550	58.1
	348	426	424		
Self-employed	310	249	281	317	2.3
Independent professional				1527	81.4
	842	1159	882		
Employer	735	946	1095	729	-0.8
Domestic employee			113	201	56.6
	128	116			
Average	325	358	376	393	20.8

Source: INE (1999), own calculations.

The perspective on labour incomes can be complemented by having a closer look at the income distribution by occupational categories, which is illustrated in Table 11. The first quintile accounts for incomes around the poverty line, and important shares of the self-employed and the domestic employees

<sup>49</sup> The share of blue-collar workers in total employment declined from 16.2 percent in 1995 to 10.2 percent in 1999, the domestic employee's share during the same period from 5.4 to 3.1 percent.

receive these very low incomes. The average incomes of the open-end fifth quintile also show interesting tendencies. 14.1 percent of the self-employed and 26.5 of the white-collar workers earn significantly higher average incomes than the only 7.2 percent of the blue-collar workers found in the highest income quintile.

**Table 11 — Income Distribution Based on Income Quintiles by Occupational Category, 1995, Percentage**

Occupational Category	Income Quintiles					Average income in 5th Quintile <sup>a</sup>
	1st	2nd	3 <sup>rd</sup>	4th	5th	
Blue-collar worker	14.9	26.0	27.2	24.7	7.2	1430.5
White-collar worker	12.1	20.0	21.6	19.8	26.5	2248.7
Self-employed	28.7	18.0	19.7	19.5	14.1	1805.7
Employer	4.3	6.4	12.4	27.3	49.6	3089.3
Independent Professional	0.0	0.0	4.7	11.1	84.3	2449.0
Domestic employee	57.5	36.2	5.3	0.6	0.4	2699.0
N/A	0.0	0.0	0.0	0.0	100.0	958.0

<sup>a</sup> In current Bolivianos. The (end of period) exchange rate Bolivianos per US-Dollar was 4.9 in 1995.

Source: INE (1995).

Labour incomes also vary with the enterprise size. The share of the two lowest income quintiles accounted for about 40 percent in small establishments with 1-4 workers, 30 percent for medium-sized establishments with 5-19 workers and 17 percent in larger ones (1992).<sup>50</sup>

<sup>50</sup> Data from INE (1995), own calculations.

Labour market empirics involve many difficulties of which only some will be touched upon in detail. Many objections apply to all studies that we will review in the following. The existence of unobserved characteristics, such as the quality of on-the-job training, poses a major problem. Multicollinearity also aggravates empirical analyses. Often, labour market entry point variables, such as years of schooling, may capture the effect on earnings that results from experience and training on-the-job. To this theoretical problem adds the low quality of data, which is a crucial and often neglected aspect especially in empirical work on developing countries.<sup>51</sup>

### *Earnings Function Estimates*

One of our main subjects of interest is, of course, the wage determination process, which is at the roots of an explanation of the very low incomes for some individuals in the labour market. Estimates of Mincerian earnings functions are usually extended to include further explanatory variables, such as gender, ethnicity or union membership. Segmentation should manifest itself in different wage determination mechanisms. A number of studies focus on labour market segmentation in Bolivia.<sup>52</sup> Pradhan (1995) and Monsted (2000) estimate formal and informal sector wage equations for the Bolivian labour market correcting for selectivity bias by a Heckman procedure. This approach, however, may not lead to satisfying results if the variables in the selection equation are the same as in the wage equation. Then, identification depends exclusively on the model and on the normality assumptions being correct. However, in a segmented labour market, the factors that account for belonging to a certain segment are associated with the factors that are essential in the wage equation, such as education or experience. Therefore, these restrictive assumptions are not likely to hold. Hence, these empirical approaches are not further discussed.

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<sup>51</sup> The low quality of data in many developing countries is not only an administrative or financial problem of Statistical Offices. It is simply due to the fact that many poor people, especially the self-employed, cannot provide reliable information on what they earn or on how many hours they work. These numbers are central to estimations about earnings and, hence, the results have to be treated with much more caution as one typically observes in empirical work on developing countries.

<sup>52</sup> See Pradhan (1995), Pradhan and van Soest (1995), Monsted (2000), Montaña and Padilla (1997) and Vos et al. (1997).

Due to the methodological difficulties of the above approach, a single earnings equation estimate is considered to be the more reliable way to give a notion about the wage determination process. Including dummy variables for different segments in the labour market can also show the existence of different earnings functions. Fields et al. (1998) estimate a Mincerian earnings function including additional dummy variables for the region, the formal sector, gender, and – if available – ethnicity, training (if the worker was enrolled in on-the-job training within the last six months), and union membership for the Bolivian labour market for different years from 1992 to 1995. The main findings that are of interest to our analysis are that, *ceteris paribus*, education raises earnings and so does experience at a decreasing rate. In some years, earnings in the formal sector<sup>53</sup> are significantly higher, but for other years they are not. On-the-job training raises earnings, as does union membership. According to the authors, training should be interpreted rather as an indicator of job quality than a variable that would explain the effectiveness of on-the-job training. A decomposition of the wage determining factors leads to the conclusion that education is the crucial variable in explaining earnings (Fields et al., 1998, pp. 9-10). An estimate by Pérez de Rada (1997) for 1994 yields similar results.

These findings are consistent with the segmented labour market perception. Yet, many would argue that education is most rewarding in a smoothly functioning labour market, since education has little payoff for people trapped in “bad” jobs. However, this perception does not take into account that education may provide labour market entry ports. Thereby, education can lead to the initiation of virtuous circles of skill accumulation, e.g. through learning and training in high-quality jobs. The studies confirm the important role of job quality in determining earnings. Apart from the above findings, these studies cannot confirm a formal-informal dichotomy of the labour market based on the organisational characteristics of the workplace.

### ***Poverty and Employment***

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<sup>53</sup> The informal sector includes all activities in which managerial and productive tasks are not completely separated. Independent professionals and public employees are classified as formal.

The above studies concentrate on incomes and earnings. When we are concerned with poverty, it is also worthwhile to address its determinants directly. Poverty is usually identified by means of poverty lines or by belonging to the bottom of the income distribution. This is done by Fields et al. (1997 and 2000). These authors analyse the individual determinants of being poor using a logit model for Bolivian household survey data from 1994. The dependent variable is the probability of being poor and the explanatory variables are educational attainment levels, age, ethnicity, the number of persons in the household, gender, region, a binary variable for economic activity status, and employment characteristics. Their results with regard to these employment characteristics are interesting for our purposes. A formal sector variable is not significant. Having participated in on-the-job training significantly reduces the probability of being poor. As has already been noted above, Fields et al. (2000, p. 14-15) also find this variable to be an indicator for employment of better quality and more stability. The exact specification of the dependent binary poverty variable remains nebulous. The authors could have considered per capita family or individual incomes. In either case, this analysis considers intra-family processes, which are crucial in poverty analysis, only rudimentarily.

In poverty analyses, we are rather interested in family and resulting per capita incomes than in individual incomes. How much individual earnings can tell about poverty depends on the intra-family structure of earnings. Increased female labour market participation causes labour supply decisions to be taken to a greater extent jointly by the spouses.<sup>54</sup> Participation of women increased significantly in the 1980s (from 28 percent in 1976 and 31 percent in 1985 to 44 percent in 1989) but only slightly throughout the 1990s (to 46 percent in 1995).<sup>55</sup> The figures in Table 12 show that households at the bottom end of the income distribution rely, on average, only on the labour income of one

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<sup>54</sup> In a study about household labour supply in urban areas of Bolivia, Pradhan and van Soest (1997, p.309) find that intrahousehold effects are substantial. Low earnings of the husband are compensated by more hours worked by the wife. In the above segmentation model, such effects could be interpreted as reinforcing the mechanism that drive segmentation and limited mobility.

<sup>55</sup> These numbers are from Arze et al. (1993, figure II.10) and own calculations based on INE (1995).

household member. Fields et al. (1997, p. 5) find that the poverty incidence is higher among larger households. These stylised facts can only give an impression of the complex relations between household structures and poverty. In poverty analysis, it is often overlooked that family structures, e.g. the fact of being married, are endogenous (World Bank, 2000b, p. 18).

**Table 12 — Households and Number of Employed Persons by Income Quintile, 1995**

		Income Quintiles				
		1st Quintile	2 <sup>nd</sup> Quintile	3rd Quintile	4th Quintile	5 <sup>th</sup> Quintile
Households	639 985	128 003	128 115	127 919	128 035	127 913
Share in %	100	20.00	20.02	19.99	20.01	19.99
Persons employed, average	1.88	1.20	1.53	1.88	2.24	1.81

Source: INE (1995).

Another important aspect is that the job held by the household's head has obvious implications for the employment decision of other household members. In the light of the importance of self-employment and small enterprises, it is likely that many household members are employed in the enterprise of the household head. This can be interpreted as a reinforcing mechanism in vicious employment circles at work in poor families. On the other hand, self-employment allows other family members who would otherwise be very limited in finding employment opportunities to engage in productive activities. The poverty incidence among families whose head is self-employed is significantly lower than among families headed by blue-collar workers, which is shown in the poverty profile provided by Jiménez and Yañez (1997).

Compiling poverty profiles is a standard approach to assess poverty. They indicate the probability of being poor or the incidence of poverty according to various characteristics, such as the region where the household is located and

different characteristics of the household's head. Poverty profiles can also be based on individual characteristics as noted by Fields et al. (2000) or the World Bank (2000b, p. 12). As has been indicated above, this approach neglects important intra-family effects. Jiménez and Yáñez (1997) carry out a poverty assessment based on the characteristics of the household head between 1990 and 1995. They also find that low educational attainment of the household head is associated with higher levels of poverty. With regard to occupational categories, they show that poverty incidence is high among households headed by blue-collar workers, as has been noted before. Poverty incidence and extreme poverty has declined among the households headed by salaried workers between 1990 and 1995. The self-employed have not experienced this general improvement. A relatively high share of about 20 percent of these households are found to live in conditions of extreme poverty throughout all the examination period. The figures for the other occupational groups show important variations, which may be due to statistical deficiencies, which is why they should be interpreted very carefully.

The previous paragraphs have stressed the importance of household structures in addressing poverty issues. Furthermore, we should take into consideration the loss of information involved in categorical regressions, i.e. in this case, binary dependent variables (poor vs. non-poor), and the problems arising from poverty line definitions. Therefore, the approach proposed by the World Bank (2000b, pp. 17-30) that relies on linear regressions including explanatory variables for the household head and spouse is found to be more helpful in poverty assessment than the aforementioned "poverty profile approaches". The regression explains the per capita income through geographic location, household level variables, characteristics of the household head and the same set of characteristics of the spouse if there is one (World Bank, 2000b, p. 17). Again, the results indicate that the gains of education are substantial. Heckman regressions<sup>56</sup> confirm that the marginal gains to education rise with the educational level. An important result is that one labour income is not enough to

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<sup>56</sup> Here, the Heckman regressions correct for the selectivity bias involved in the labour market participation decision. Therefore, the above objections apply only to a limited degree, since it is more likely that variables can be identified that appear only in the selection, and not in the earnings equation.



lift people out of poverty. Thus, education may help to reduce poverty, but female labour participation is also a decisive factor. With regard to employment patterns, the study finds them to have a large impact on per capita income and poverty. An unemployed household head significantly lowers income. No systematic differences between white-collar and blue-collar workers can be found. Being self-employed may significantly increase income.<sup>57</sup> The family also gains from a household head employed in the formal sector that is specified as “opposed to the informal sector” (World Bank, 2000b, p. 21). Furthermore, employment in small or medium-sized enterprises has a negative effect on per capita income.

The above studies and the involved difficulties have demonstrated the complexity of poverty assessment. Some results indicate segmentation and the existence of vicious circles in the labour market. The structure of the returns to education can be interpreted as a sign of skill divergence mechanisms. The evidence for the importance of the quality of employment in explaining poverty is rather weak which is likely to be due to the lack of adequate indicators. Nevertheless, when variables, which are related to employment quality, are available, they are found to be significant. The role of self-employment shows patterns that are consistent with the view proposed in part. On the one hand, persistent extreme poverty can be observed for an important share of households led by self-employed. On the other hand, self-employment can significantly raise family income. These results confirm the perception of large differences within the self-employed, and the existence of a group that might correspond to tertiary employment.

### ***Limited Mobility***

Labour market mobility is definitely an under-researched field – not only in Bolivia. This may be attributed to the lack of household panel data.<sup>58</sup> Nevertheless, there has been very closely related research under the label of

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<sup>57</sup> This may be due to the fact that the researchers included the independent professionals in this group.

<sup>58</sup> Exceptions are Maloney’s studies of the Mexican labour market. See Maloney (1998 and 1999).

“social mobility”.<sup>59</sup> Andersen (2001) addresses this issue for the Bolivian case. The basic idea of determining social mobility on the basis of cross-sectional household data is to assess the importance of family background for educational outcomes of young people. If the family background is found to be influential, social mobility is low. Andersen (2001, pp. 8-9) uses a simple OLS regression, which explains the schooling gap (age minus actual schooling years minus six) by certain family characteristics. Her analysis includes urban and rural areas. The regression results as well as the results of a Fields decomposition indicate that the most important variables in explaining schooling gaps are the parents’ educational level, the geographic dummy (urban) and the household’s per capita income. The analysis also includes urban self-employment, which is found to be insignificant. Andersen (2001, p. 18) concludes that social mobility in Bolivia is very low, even compared to other Latin American economies.<sup>60</sup> She emphasises that social mobility is even lower for females, and rural areas, in general.

Gray-Molina et al. (1999b, p. 15-17), who study the role of social capital with regard to poverty and asset accumulation, observe a process of social stratification with regard to education in Bolivia. They detect a worsening of access to educational opportunities for the poor, which they consider to be a reason for the potential gains from structural adjustment to be unequally distributed.

These studies focus on schooling or formal education. It has been argued before that employment and the involved training on-the-job (or the lack of it) are crucial in determining labour market mobility. If family background has such an important effect on the educational opportunities of young people, one might find a strong relation between sociological variables and the quality of employment. This is very likely in the case of family enterprises, which usually

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<sup>59</sup> Social mobility is a concept introduced to consider inequality from a dynamic perspective. Static measures of inequality refer to the distribution of income, educational attainments, or other indicators. Dynamic social mobility measures refer to individuals or families at different points in time, and their opportunities to advance in the respective distribution. Typically, the literature focuses on income or educational mobility. For an overview of the measurement of income mobility, see Fields and Ok (1996).

<sup>60</sup> For comparative studies of social mobility in Latin American countries see Andersen (2000) and Behrman, Birdsall and Székely (1998).

provide the first workplace for a teenager of a poor family. The important role of family and small enterprises is indicated in Table 13, which shows the occupational categories according to firm size for the 10 to 18 year-aged already employed urban population. Family-workers are by far the most important occupational category, and small-sized firms employ almost 95 percent of this age group.

**Table 13 — Employment According to Occupational Category and Firm Size, Age Group between 10 and 18**

		Number of People Employed		
		1-4	5-19	20 or more
Total employed	199 433	147 566	39 177	12 690
Share in %	100.0	74.0	19.6	6.4
<b>Occupational Category</b>	<b>Share of Total Employed in %</b>	<b>Share in %</b>		
Blue-collar worker	12.8	44.9	44.2	10.9
White-collar worker	22.6	52.1	25.9	22.0
Self-employed	11.7	100.0	0.0	0.0
Employer	0.4	100.0	0.0	0.0
Family worker	45.2	82.0	18.0	0.0
Domestic employee	7.3	100.0	0.0	0.0

Source: INE (1999), own calculations.

The role of learning on the job in determining labour market mobility is crucial. Experience, as it appears in the above earnings function estimates, corresponds to actual working years, but it does not tell anything about where or in which job this experience was acquired. However, the finding that job quality plays a role in determining earnings might also be interpreted with regard to limited mobility. If job quality matters for earnings, it is likely that it has an impact on labour market mobility. The findings indicate that workers accumulate additional skills on the job. Hence, the differential access to educational

opportunities, and the resulting limited mobility, is maintained or reinforced through differential quality of learning on the job. For a thorough assessment of these issues, panel data are needed that allow following individual education, employment and training careers. Field studies of employment career may be a more feasible way to assess limited mobility than the attempt to introduce household surveys that trace the same households over a longer time period. However, the results obtained with regard to social mobility support the hypothesis that limited mobility runs across generations and that sociological factors, thus, play an important role in determining employment opportunities.

### ***Preliminary Remarks***

Although empirical tests for the view of a segmented labour market put forward in part cannot be provided, we find some of the descriptive statistics and empirical investigations to support it. Diverging trends in incomes can be observed. The low incomes of the groups at the bottom of the income distribution, in combination with the mobility limiting mechanisms related to their sociological background, may indicate the existence of vicious poverty and employment circles. The structure of the labour market does not correspond to the conventional assumptions about the informal sector. Employment quality is found to be significant in wage determination, and in explaining poverty. A dynamic analysis based on individual employment characteristics over time would yield more reliable supporting or disapproving evidence.

## **I.1. Labour Market Institutions and Reforms**

In this part, we consider two main issues. First, we will discuss the Bolivian labour legislation, which introduces important rigidities into the labour market. Second, we analyse the organisation, benefits, and coverage of the social

security system; hence, going beyond the typical exercise of summing-up non-wage labour costs due to social security contributions.<sup>61</sup>

### ***Labour Legislation***

Labour legislation in Bolivia essentially consists of the “Ley General del Trabajo” (LGT – General labour law), which dates back to 1942. Since then, labour laws have been subject to various modifications and amplifications, which created a body of laws that is considered as being too complicated by many analysts. Its difficult interpretation and application result in notable distortions in the labour market.<sup>62</sup> According to the most recent staff country report of the IMF on Bolivia (2000, p. 11) from March 2000, the IMF and the Bolivian authorities intend to make labour legislation more flexible. It was agreed upon the proposal of a new law with the objective of modernising labour regulations. By April 2001, this proposal, which was presented in December 2000, is one of the subjects causing fierce political struggles in Bolivia, with the government and the trade unions as the protagonists.

The complexity and contradictions involved in the large number of regulations create a climate of uncertainty (Jemio, 1999a, p. 39). There are a large number of special treatments for certain groups in the labour market, which reveals that rent-seeking behaviour is encouraged in such an uncertain environment. Also, the regulations introduce important rigidities through high hiring and separation costs, and excessive mandatory overtime pay. Firms are restricted in adjusting their labour input not only in quantitative terms but also qualitatively, since rigid contracts limit the mobility within the firm. The use of fixed-term contracts is also restricted. Current regulations discriminate against women (IMF, 2000, p. 11). To obtain a more detailed view on the regulations,

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<sup>61</sup> The wage bargaining process between employers, trade unions, and government is often emphasised as a central institution of the labour market. Trade unions are a major political player in Bolivia, although they cover only a small fraction of the workforce. Their role is not analysed here, since the focus is on protective labour market institutions.

<sup>62</sup> See Jemio (1999a, p. 39) or Ordóñez and Padilla (1997, p.37).

we examine some of them that are believed to be of major importance, and different reform proposals.<sup>63</sup>

The trade unions claim that the indefinite work contracts established in the LGT have to be maintained, whereas the technical proposal of the government suggests the introduction of a new type of contract for outsourced tasks, which is not subject to social security contributions. According to the government initiative, severance payments should be reduced from three to two monthly salaries in the case of dismissal without just cause, from one monthly salary per year worked to a half monthly salary per year worked in the case with legal cause, and the time limit of dismissal advance notices cut from three to two months. The probation period allowed for in indefinite contracts should be reduced from two months to one month. Trade unions demand the abolishment of this modality. There is no information available on proposals with regard to temporary contracts, which are now restricted to one renewal (Cox-Edwards, 1997, p. 139).

The government wants to equalise the maximum of working hours allowed for men and women to 48 hours. The LGT limits this maximum to 40 hours to women. The trade unions' proposal is an overall reduction to 40 hours per week and 35 hours in the case of night work. Furthermore, they demand to declare Saturdays as no-work days, whereas the government plans to open the Sunday for work, abolish extra payments for Sunday work, and allow for compensation by a free day during the week.

Government and trade unions agree that certain groups, which have been excluded from the application of labour laws, should be included. These are adolescents, domestic employees, and professional sportsmen. Special rules are supposed to apply to these groups, which will not be considered in detail. The trade unions also press for a special legislation with regard to home workers.

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<sup>63</sup> The government proposals are taken from La Razón (December 5<sup>th</sup>, 2000) and the perspective of the trade unions draws on a proposal for the modernisation of the LGT elaborated by a so-called "Plataforma por el Derecho del Trabajo" (2000), which represents the major Bolivian trade unions, and different NGOs.

The Bolivian trade unions are currently mobilising their members against a more flexible labour legislation and other structural adjustment measures. Political observers believe that 2001 will see many strikes and demonstrations. As has already been remarked, the political economy of labour legislation is complicated. Proposals from both sides contain strategic elements that will be used in the quest for compromises. This compromise is likely not to touch the fundamentals of labour regulations in Bolivia. The previous part has shown that the reality of the labour market would require a “regulatory revolution”, a topic that we will consider in some more detail in part Rethinking Social Protection and Labour Market Regulations. There are no figures about the share of employment relations, in which these regulations actually apply, but the above analyses suggest that this share is rather small. The share of formal employment relations is particularly important in judging the impact of the minimum wage, which is determined annually in negotiations between the government and the trade unions (Jemio, 1999a, p. 40). All these labour market regulations raise labour costs, as do the contributions to the social security systems, which will be discussed next.

### *Social Security Systems*

A fully legal employment contract requires the employer to pay mandatory social security contributions. These amount to 10 percent of gross wages for health insurance and 12.5 percent for the pension fund (von Gersdorff, 1998, p. 6).

The Bolivian health system is made up of a of three subsystems – the health funds, a public, and a private subsystem. The health fund system (“Cajas de Salud”) is financed by the employers’ social security contributions for health insurance.<sup>64</sup> In 1994, this system had about 350 000 contributors and insured approximately 1.6 million people, i.e. about a fifth of the Bolivian population.<sup>65</sup> The insurance guarantees standard health benefits. It has already been shown that

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<sup>64</sup> The following borrows heavily from Cárdenas et al. (1996, p. 32-33).

<sup>65</sup> The system includes the contributors and their dependents, retirees and non-contributing beneficiaries (disabled persons, veterans, widows, former high-level public officials) and their dependents.

coverage is confined to salaried workers, in particular to white-collar workers, who have been at the same workplace for a longer period of time. In 1995, only 23 percent of the users belonged to the poorest 40 percent. High-income health fund members frequently use private providers, since access is often limited by long queues and specialised treatment is often perceived as of higher quality in the private sector. The second subsystem is the public health system or “Servicio Nacional de Salud” (SNS), which is financed by the general budget. It is open to all Bolivians and charges small fees for the use of its services, which are not significant in the system’s financing. There have been efforts to improve the quality of the SNS. It plays an important role in providing basic services, such as pre-natal care. As in the case of the health funds system, the services are mainly used by the higher groups of the income distribution. In 1995, only 10 percent of those who sought treatment in SNS facilities belonged to the lowest per-capita spending quintile (Cárdenas et al., 1996, 29-30). Private health providers account for about a third of spending on health in Bolivia. Since their role in fighting poverty will be limited, they do not receive further attention here.

The reform of the Bolivian health system is under way, and the efforts will be strengthened in the course of the PRS. The provision of basic services through the SNS is planned to be improved, especially with regard to mother and child protection. The long-term goal is the integration of the public subsystem with the social security system, and the separation of insurer and service provider. This integrated system should cover all the population (Bolivia, 2001, pp. 63-64).

As has been noted before, the pension fund system has already been subject to a major reform in 1996.<sup>66</sup> The old pension system was closed down. A new system was implemented which bases on individual capitalisation accounts, which are administered by private institutions, the “Administradoras de Fondos de Pensiones” (AFPs). The retirement age is not fixed, but at the age of 65 people can retire regardless of their accumulated savings. Participants can chose to retire when their savings can replace at least 70 percent of the average salary during the last five years of employment for the expected remaining lifetime. These

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<sup>66</sup> This paragraph draws on von Gersdorff (1998, pp.6-7) and Callisperis (2000, pp. 62-68).



individual accounts are complemented by the “Bonosol”, a social program that provides all participants over 65 with an annuity of US\$ 248. The shares of the privatised public enterprises finance this program. If the savings in the individual accounts are exhausted, the participants will still receive the “Bonosol”. The new system overtook the affiliates of the old system. Salaried workers have to be affiliated with the pension fund. Independent workers can chose to participate in the system on a voluntary basis. Critics argued that the resources of the privatisation programs benefited only the small fraction of beneficiaries of the pension fund system. Therefore, the government created the “Bolivida”, an annual payment, which replaced the “Bonosol” and covers all people over 65 registered with the “Padrón Electoral” (electoral register).<sup>67</sup>

In addition to the withheld 22.5 percent for health insurance and pension fund contribution, the employer has to pay 2 percent for insurance covering physical impairment or death from work-related causes, and 3 percent for a housing fund. A 13 percent income tax is deducted if the income exceeds two minimum wages.

We have considered the details of the social security systems since this knowledge in combination with information on actual coverage is essential in order to make a judgement about the additional labour market segmentation induced by labour market regulations. The findings for Bolivia indicate that the regulatory framework, its benefits, and its coverage can be consistent with the perception of a labour market that is integrated for certain groups who choose between coverage and non-coverage. Due to the structure of the system, being covered by health insurance does not involve benefits important enough to make health-insured employment generally preferred. It is likely that the line of segmentation in the Bolivian labour market does not coincide with the line between employment covered or not covered by health insurance. The reform of the pension system is too recent to evaluate its labour market impact. The coverage under the old system implies that the pension scheme benefited only a small fraction of the labour force holding primary jobs, above all in the public

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<sup>67</sup> This “counter-reform” was implemented by the new government of Hugo Banzer in 1998. In 2000, about 300 000 people received the “Bolivida” payment of US\$ 60. See Bolivia (2001, p. 74) and Gray-Molina et al. (1999a, pp. 47-48).

sector; thereby reinforcing segmentation through delivering benefits to specific groups in the labour market, primarily to public sector employees. This may also hold for labour market regulations concerning contractual relations. It is not clear how many workers actually have effective, i.e. enforceable, contracts. Since these regulations presumably benefit a small group with stable jobs in the labour market, they induce important additional segmentation.

## **II. THE BOLIVIAN POVERTY REDUCTION STRATEGY: A LABOUR MARKET PERSPECTIVE**

Poverty is a multi-dimensional phenomenon. Traditional non-monetary indicators of human well being, and hence of poverty, refer to health, education and access to basic infrastructure services. Poverty can also be assessed in monetary terms with regard to consumption or income. In order to fight poverty, its different dimensions, its intensity, and incidence have to be identified. Despite the complex nature of poverty, nobody would doubt that low labour incomes are one of the main sources of poverty. Income poverty is the consequence of a lack of employment opportunities and of assets, in particular of human capital.<sup>68</sup> Low incomes per se already make people vulnerable. The labour market perspective put forward in this paper provides important insights for the design of sustainable and comprehensive poverty reduction strategies. Sustainability means breaking the vicious circles that limit the opportunities of the poor. The Bolivian PRS understands SME development as the central strategic instrument to open employment opportunities for the urban poor (Bolivia, 2001, p. 45). The strategy aims at increasing the productive capacity of the poor mainly through improving the access to and the quality of the educational system.

The Bolivian labour market exhibits features corresponding to the segmented labour market hypothesis, which implies that poor people are stuck with low-quality jobs due to the presence of vicious circles. In this chapter, we analyse the Bolivian poverty reduction efforts from a labour market perspective. First, it will be argued that education should be more employment-oriented.

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<sup>68</sup> These introductory notes base on ideas from the World Development Report 2000/2001 (World Bank, 2000a) and the Bolivian PRS (Bolivia, 2001).

Poverty reduction strategies should move towards a more integrated perception of SME development and education. Then, we consider the role of labour market institutions, and conclude with general policy implications, which have emerged in the course of the above analyses.

## **II.1. Integrating Dual Education and Microenterprise Development**

The following perspective goes beyond the typical “demand-versus supply-side measures” view at labour market policies in developing countries. It will be argued that a dual education system, which addresses the demand- and the supply-side, may help the poor to escape vicious education and training circles.

First, we critically review educational and microenterprise development measures in the Bolivian PRS. The PRSP treats the issues of SME development and education as separate elements. Taking into consideration the important role of self-employment and the discussion about the role of learning on the job, it is obvious that the improvement of employment and educational opportunities are closely interrelated. Nevertheless, treating them separately shows that the linkages are not fully recognised.

The Bolivian PRS identifies three strategic guidelines for SME development: First, to create a competitive environment, second, to promote the development of a market for non-financial services, and, third, to strengthen private and public support to SMEs. Hence, important actions will be taken concerning the improvement of the regulatory and legal framework and the provision of technical and entrepreneurial assistance services to small-scale activities. Emphasis is also posed on better access to microcredit and financial services.<sup>69</sup>

The reform of the educational system, which aims at improving access to and quality of schooling, is under way. Bolivia has had a history of high illiteracy and grade repetition in public schools is common (Psacharopoulos et al., 1997, p.

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<sup>69</sup> See Bolivia (2001, pp. 45-53) for more details. These measures will not be the focus of the following analyses. This does not imply that they are perceived as less important as educational or training issues.

397 and World Bank, 2000b, pp. 46-50). It has been frequently noted that the low quality of public education is a major problem, in particular at the primary level. Bolivia has relatively high gross enrolment rates, but many students drop out before they complete the primary level. Due to the deficiencies of the public system, private education plays an important role. Psacharopoulos et al. (1997, pp. 403-404) find a high willingness of households to pay for private education, which accounts for about 20 to 25 percent of students enrolled in primary and secondary education in the main cities. Of course, children of richer parents are more likely to be in a private school than those of poorer families. These issues have been addressed in an educational reform from the mid-1990s and are substantiated within the framework of the Bolivian PRS. The reform of the curriculum extended basic obligatory education from 5 to 8 years. Secondary education, which starts at the age of 14, consists of two cycles, each of 2 years of duration. The first post-obligatory cycle emphasises general knowledge in subjects, such as languages, mathematics, and natural sciences. The second cycle has two options. Students can choose between a scientific-humanistic and a technological education. The latter includes the choices between professional, industrial, commercial, administrative, and agricultural technician (Campus OEI, 2001). This career aims at the education of skilled workers who fulfil the requirements of the labour market. The different types of secondary education also open the diversified opportunities to continue education in tertiary institutions, such as universities or technical schools. The application of this new curriculum is considered as a central issues in the Bolivian PRSP. Further topics are the accessibility and affordability of schooling, the availability and quality of inputs, i.e. teachers and learning materials, and parental and community empowerment (Bolivia, 2001, pp. 58-60).

There is no doubt that the improvement of the deficient primary education is a key task. Therefore, the educational reform includes many important aspects concerning the quality of schooling. However, the labour market perspective on education suggests a different focus. Technical or entrepreneurial skills rather than the score of maths tests are the underlying indicators, by which education should be judged. The National Dialogue from 2000 brought about the claim that the supply of technical training and education, which correspond to labour

market requirements, should be increased.<sup>70</sup> Ten years of general education are needed to enter a technically oriented career. At the age of 18, the student will receive the title as “técnico medio” without former integration into the work process. This structural feature of the educational system is regarded as reinforcing vicious education and training circles, since such a technical education involves high costs that many poor parents will not be willing to pay. Furthermore, the share of labour market relevant knowledge of the technical secondary education is low, and, often, schools cannot provide the necessary technical training, since the availability of machinery and equipment is very limited.

Therefore, it is argued in favour of an integrated approach towards more employment-oriented education and SME support. What is meant by employment-oriented education and how can policy integrate education and SME development? Employment-oriented education takes into account the skills needed in the labour market. It is, therefore, essential to analyse these requirement through detailed labour market studies. Employment-orientation cannot be achieved alone by changing curricula. The skills required in the labour market can be transmitted only to a limited degree in a classroom. As has been stressed before, the informal “apprenticeship system” of SMEs is the most important transmitter of these skills, and it does and cannot fulfil this task satisfactorily.<sup>71</sup> Designing policies that address the deficiencies of the present system, i.e. the lack of practical training in the formal system and the low quality of training in the informal sector, is crucial. Dual education systems seem to offer an appealing solution to these problems. A dual system would link secondary

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<sup>70</sup> See Bolivia (2001, p. 58). The National Dialogue was a participatory discussion process, which was aimed at integrating civil society into the formulation of the PRSP.

<sup>71</sup> It is common in Latin America to refer to the first years on the job as a period of apprenticeship (aprendizaje). As in the Bolivian case, there is no universal formal apprenticeship system. During this period, which serves to acquire skills on the job, young workers without experience are paid less initially. They are called “ayudantes” (assistants) or “aprendizes” (apprentices). The terms are used interchangeably. Furthermore, it is not clearly defined when the apprenticeship period is over. See Bakke-Seeck (1997, p. 330) for the Peruvian case.

education with training on the job.<sup>72</sup> The fundamental idea of dual education is the formalisation of the informal apprenticeship system through complementing it by theoretical and practical courses. Traditionally, dual education has been an important element of the German educational system. Apprentices go to school for 1 or 2 days, and work during the rest of the week. Payment is considerably lower for apprentices than for other employees. The duration of the apprenticeship varies between 2 and 3 years, according to the level of schooling accomplished. The apprentice completes the education through a successful theoretical and practical test. It is clear that this system would have to be modified, before applied to the Bolivian context and the particular characteristics of production in the informal sector. The assessment of the exact modalities how to implement a dual education scheme would, however, go beyond the scope of this paper.<sup>73</sup> Nevertheless in short, the following aspects would have to be considered. The theoretical and practical courses would have to be in the evening and should not take too long, so that opportunity costs neither for the apprentice nor for the employer are too high. Low entry costs for the apprentice have to be a major benchmark in establishing dual education schemes. Eventually, the most important element is to raise the employers' consciousness towards education and training, the willingness to provide apprenticeship places, and the teaching and training capacities. Therefore, educational and training issues are closely interrelated with SME development. Other measures directed towards SMEs, such as technical assistance, microcredit programs or framework improvement, are indispensable for a successful implementation of a dual system. In fact, dual education could be considered as an important element of SME support programs, and vice versa. Considered from a global perspective, it makes the supply-side more responsive to changing labour requirements, since it links demand and supply. Educational and training subsidies should be allocated on both the demand- and the supply-side. The potential benefits of such an

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<sup>72</sup> This approach is also proposed by the ILO in the World Employment Report 1998/99 that deals with employability in the global economy and how training matters (ILO, 1998, p. 207).

<sup>73</sup> See Lohmar-Kuhnle (1997, pp. 145-157) for a detailed analysis of some programs that haven been implemented in different developing economies.

integrated approach to microenterprise development and employment-oriented education are substantial.

It has been shown in the preceding chapters that the creation of employment opportunities and skill acquisition are closely interrelated. One of the central arguments for labour market segmentation is that opportunities for advancement and labour market mobility crucially depend on the additional acquisition of skills in employment, i.e. on training on the job. A large part of workers remains trapped in low-quality jobs since they are not given the opportunity to accumulate additional skills. Dual educational systems can provide a means to break up the vicious educational and skill circles that have been identified, in particular for the poorest of the poor. The production units of the informal sector would no longer be closed systems. Instead, the establishment of apprenticeship systems would provide a continuous flow of new ideas into the informal sector, which cannot be achieved by conventional programs. Linking education and SME development can involve important spillover effects with regard to on-the-job training. In most SMEs, there is little consciousness of the importance of skill advancement on the job, at least concerning salaried workers. This attitude might be changed. Instability of employment, which has been demonstrated to be a major problem in SMEs, can also be reduced. Apprenticeships may also lay ground for successful self-employment.

## **II.2. Rethinking Social Protection and Labour Market Regulations**

Many analysts have put labour market reform on the Latin American reform agenda in recent years. By most of them, the issue is considered as the missing element in a series of liberalisation efforts that have been undertaken in other markets.<sup>74</sup> In this part, an alternative view will be proposed that emphasises effective protection instead of increased flexibility.

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<sup>74</sup> See Guasch (1999), Márquez y Pagés (1998) and Edwards and Lustig (1997). For a detailed overview of labour market regulation in Latin America see Cox-Edwards (1997) and Guasch (1999, pp. 29-47).

Guasch (1999, pp. 49-57), who studies labour market reform and job creation in Latin America, comes to the conclusion that the employment outlook can only be improved by lowering payroll taxes and other indirect labour costs and by eliminating institutional rigidities, i.e. by increasing labour market flexibility. He argues that lower labour costs would raise employment and increase formal labour relations. This argument is strengthened by comparing the rigid European and the flexible US American labour market model, of which the latter is found to be much more effective in employment creation, and therefore more relevant to Latin America (Guasch, 1999, p. 90). For the Bolivian case, Jemio (1999a, p. 41) stresses the possible positive effects of labour market reform on average incomes, distribution, and employment. The positive growth impact of structural adjustment would then be better reflected in labour market outcomes. Lower non-wage labour costs, reducing complexity and discretion, increasing transparency and less uncertainty are his guidelines for regulatory reforms. Such a labour market reform would contribute to private sector competitiveness. The idea underlying these approaches is the “opening of the formal labour market” (Cox-Edwards, 1997, p. 148).

The Bolivian PRSP does not address labour market regulations. Institutions with important impact on the labour market, such as social security systems, are not referred to from a labour market perspective. Although the strategy has been formulated under significant influence of government institutions and guided by the conceptions of the IMF and The World Bank, the reform of labour legislation is not an issue, which is certainly due to the political difficulties involved in labour market reform.

How should labour market reform issues be approached in the Bolivian PRS? Should increased flexibility be the guiding principle? The impact of labour market reforms, which are only guided by increasing flexibility, will probably be limited. The analysis of the Bolivian labour market suggests that the importance of labour market regulations is overemphasised. Only a very small fraction of the labour force actually benefits from the full protection provided by labour laws and social security systems. Therefore, playing with numbers, i.e. cutting severance payments by certain amounts or reducing the time periods for advance



notices of dismissal, will not have a major impact on employment or on the number of people in formal employment relationships. In labour market reform, the structural characteristics of the Bolivian economy and its labour market have to be accounted for. It has been demonstrated that these structures are far more complicated than the simple dual covered versus non-covered sector analysis suggests. Furthermore, neither the American nor the European labour market model can serve as reference cases for labour market reform in a country, where poverty and economic vulnerability are omnipresent. Innovative concepts are needed, which are not that much concerned with the reduction of distortions, but rather with the question how effective and universal protection can be provided. With regard to the reform of social security, Bolivia is on the right way. Bringing in line costs and benefits is a promising guideline for the reform of social security systems. The reform of the pension system contains innovative elements, and the new system can serve as a basis for a universal pension scheme in the future. The strategic goal of providing universal health insurance has also been set. The issue of employment protection is certainly the most complicated one. It has been noted above that the reality of the labour market would require a “regulatory revolution”. The current reform proposals head into the wrong direction. They build on indefinite employment contracts as the centrepiece of labour legislation. Indefinite employment contracts do no longer correspond to the reality and requirements of the labour market in an open economy.<sup>75</sup> Universally applicable temporary, task-oriented or piecework contracts, which provide a certain degree of protection, seem to be more compatible with the prevailing structures of the labour market. Labour legislation has to be enforceable and universal, i.e. it should not contain discriminatory elements, which foster segmentation. One might argue that these measures are very close to the ones formulated by “increased-flexibility” proponents. The approach that emphasises protection instead of flexibility is much more likely to lead to new ideas and concepts. Furthermore, this view contrasts with the reform proposals of the ILO. According to the Committee on Employment and Social Policy,

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<sup>75</sup> Yet, adequate regulations providing job security, which correspond to the economic structures of the 21<sup>st</sup> century, have not been developed. This holds for developing as well as for advanced economies.

employment protection should be extended by the promotion and application of existing labour legislation (ILO, 2000, p. 23). Activities, in which these rules cannot be enforced, should be addressed through customised regulation.

Labour market reform involves a wide range of issues, from social security to labour legislation. In some cases, the necessity of institutional reforms with the objective of providing universal basic protection seems to be straightforward and obvious. Always, the reality of “getting institutions right” complicates matters. The political economy of labour market reform is complex. As in most reform issues, the poor do not have a voice. The potential losses to strong interest groups, such as public employees or union members, can be substantial. Despite the need of reform, expectations for short- or medium term successes are limited. Nevertheless, the proposed approach to labour market reform may provide a more sustainable reform agenda than the conventional focus on labour market flexibility.

### **II.3. Further Issues**

The policy analysis will be concluded by shortly considering two general issues in poverty reduction, viewed from a labour market perspective. These are the inclusion of the poorest of the poor, and the role of the labour market in structural adjustment.

#### ***Addressing the Poorest of the Poor***

If vicious employment and poverty circles are at work in a segmented labour market, those who are the most affected are the poorest of the poor, who perform subsistence activities at the margin of society. These people, e.g. street vendors and assistants of bus drivers, are often neglected as an important target group in poverty reduction. This is maybe due to the fact that they are often perceived as a group that will be rapidly absorbed into more productive sectors as the economy develops.<sup>76</sup> They do not acquire any additional skills in their job

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<sup>76</sup> See for example Ranis and Stewart (1999) who assume these subsistence activities to be first absorbed by a dynamic SME sector, which finally evolves and dissolves into a “modern” economy.

and they face serious obstacles to access complementary factors of production. Most microcredit programs are accessible only to already functioning enterprises or to people who are able to present some assets as a guarantee. Technical assistance rather focuses on manufacturing than on commerce or other services, which are more prevalent among the poorest. Vicious skill and educational circles work very forcefully for this group, critically limiting social and labour market mobility. These limitations have to be at the core of attempts to lift these people and their children out of poverty. Providing basic education to children out of these families, alone, will not solve the problem. Efforts are needed that are explicitly targeted at this group, which is not a simple task. Therefore, specifically designed programs or Non-Governmental Organisations (NGOs) may be best suited to address them. Paying parents to send their children to school,<sup>77</sup> expanding microenterprise development programs to reach this group, and building cooperatives<sup>78</sup> are some possible ways to approach the problems.

### ***The Labour Market in Structural Adjustment***

The labour market analysis of the previous chapters has important implications for the role of labour markets in structural adjustment. In some countries, Bolivia is one of them, structural adjustment programs have failed to deliver the expected impact on poverty levels. Labour markets perform an important function in transmitting the effects of structural adjustment. Thus, the understanding of the labour market is crucial to understand the impact of these programs. With regard to the role of Latin American labour markets, researchers emphasise the capacity of the informal sector to generate employment in the face of major macroeconomic shocks and the unexpected flexibility of real wages (Agénor, 1997, p. 2). In the analysis of structural adjustment, many researchers rely on official figures, which represent only the formal part of the economy, i.e. mainly large-sized enterprises. It is erroneous to believe that one can understand the macroeconomics of a developing country without including small-scale activities. This is nothing new, but often neglected and forgotten by the model

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<sup>77</sup> See World Bank (2000, p. 84) for an example of such a program in Mexico.

<sup>78</sup> In Quito, one can find some shoe-shining cooperatives. These organisations can have some labour division and build up an internal labour market that provides some opportunities to improve skills and advance.

and econometrically oriented economics profession of today. Addressing structural adjustment from a labour market perspective can prevent the researcher from such ignorance, since the presence of “informal” activities is too obvious to neglect it. If the informal sector is included, one has to be very careful with assumptions about its characteristics. Wrong assumptions, such as the exclusive production of non-tradables in the informal sector, can imply the formulation of policy recommendations that may have a devastating impact on the poor. If trade liberalisation lowers import taxes for certain consumer articles, such as garments or shoes, or allows for the import of second-hand products, these measures can seriously threaten the income opportunities of an important number of the poor. In order to avoid such mistakes, labour market research has to go beyond the simple formal-tradable versus informal-non-tradable dichotomy.

### **III. OUTLOOK**

Besides the above policy recommendations, further lessons for future theoretical and empirical research, as well as for policies can be derived from this paper:

Theoretical approaches to urban labour markets have to account for structural characteristics of developing economies more than is commonly the case in conventional models. The latter often make overly simplistic assumptions that do not reflect the complex reality of urban labour markets. Furthermore, labour market research should focus on mobility. To this end, dynamic approaches are needed that improve the understanding of vicious skill circles in the labour market. Learning on the job has to play a crucial role in these approaches.

With regard to empirical investigations, it has been stressed that panel data, which allow for tracing educational and employment careers, would contribute to a much better understanding of the labour market in a developing economy. However, empirical work often has to rely on cross-sectional data, since panel data sets are usually not available. At any rate, the quality of available data from household surveys must be interpreted with caution. This holds in particular for

labour income statistics, since many people are not able to quantify their income per time period. Despite these problems, the application of sophisticated econometric methods on ambiguous data sets dominates the empirical literature. In contrast, this paper argues that empirical labour market research should rely more on field studies and interviews as important complementary approaches, in particular with regard to poverty assessment.

This paper has attempted to illustrate that policies directed at poverty reduction have to be, above all, comprehensive. An important element of comprehensiveness lies in the recognition that policies are interrelated, as has been demonstrated by the proposed integrated approach to education and SME development programs. The labour market perspective put forward in this paper provides a useful framework to assess the central issues in urban poverty reduction, such as education, health, and social protection, comprehensively.

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