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Abstract: While there has been a considerable degree of agreement on the causes of child labour and the range of policies needed to deal with the problem, there has been less agreement on the theoretical underpinning of policies and practices. Most of the theories put forward deal with narrow specific issues, and are generally unsatisfactory for explaining the persistence of child labour, or for providing a theoretical underpinning of policies to eradicate it. A theory that appears to have both explanatory and policy-making advantages is the theory of cumulative causation. This chapter seeks to show how cumulative causation can be used to explain why child labour occurs in a number of developing countries in Asia, why it persists despite legislation and programs seeking its elimination, and how it can be used as the basis of policy to eliminate child labour. As well as drawing on the literature of cumulative causation, the chapter draws upon other chapters in the book for examples of issues, problems, policies and programs relating to child labour.  
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CUMULATIVE CAUSATION AS EXPLANATION AND POLICY BASE FOR CHILD LABOUR

Geoff Bamberry

Introduction

While there has been a considerable degree of agreement on the causes of child labour and the range of policies needed to deal with the problem, there has been less agreement on theoretical explanations and the theoretical underpinning of policies and practices. Of the theories put forward, most are used for studies of narrow specific issues, and are generally unsatisfactory for either explaining the existence and persistence of child labour, or for providing a theoretical underpinning of policies for its permanent eradication. A theory that appears to have the breadth to cover both explanatory and policy-making requirements, as well as the depth to explore the economic and social causes of child labour, is the theory of cumulative causation.

Cumulative causation has its origins in the late nineteenth and early twentieth century writings of Veblen (1899) and Young (1928), and was expanded in the mid-twentieth century by writers such as Myrdal (1944), Hirschman (1958), Kaldor (1966) and others to discuss economic growth in developing countries. It has been refined to investigate and explain a range of economic, geographic and social issues in the latter part of the twentieth century by writers whose work is cited below. A major advantage of cumulative causation is that unlike neoclassical economic theory, it incorporates social factors in explaining economic growth, stagnation or decline, as well as providing explanations for changes in, or persistence of, social attitudes and beliefs (Myrdal 1944 Skott 1990; Martin 1999).

The aim in this chapter is to show how cumulative causation can be used to explain why child labour occurs in a number of developing countries in Asia, and why it persists despite legislation and programs that seek its elimination. Another aim is to show how cumulative causation can be used as the basis of policy to eliminate child labour. As well as drawing on the theoretical and descriptive literature of cumulative causation, this chapter draws upon other chapters in this book for examples from a number of Asian countries of issues, problems, policies and programs relating to child labour.

The chapter begins with an overview of how the theory is based on the concept of cumulative cycles of growth and decline, a description of its focus on change, including change through invention and technical progress, and an outline of its emphasis on the influence of history on economic development. This is followed by a discussion of how child labour can be explained
through the economic and socio-economic bases of the theory. It concludes with a discussion of how political and institutional factors within the theory can be used as a basis for policies and programs to eliminate poverty and child labour.

**Cumulative Cycles of Growth and Decline**

All the contributors to this book have listed poverty, particularly extreme poverty, as the major cause for the existence and continuation of child labour in Asian developing countries. Some have drawn attention to the cumulative impact of poverty on disadvantaged groups. For example, Hasan describes ‘interactive factors’ contributing to a child becoming involved in child labour, and which operate to keep the child in an almost ‘irreversible’ state. He cites as an example, children becoming sex workers to escape poverty and starvation, and then caught in a trap of social stigmatisation, uncertain future employment and continuing poverty. Similarly Pinto (chapter 8, this volume) draws attention to the cumulative effects of poverty in her comment that “child labour itself perpetuates poverty, since the child labourer who survives the harsh conditions becomes an unskilled, debilitated adult who is not employed, even in the industry that earlier exploited him or her”.

In cumulative causation theory, this process has been described as a vicious cycle, where the cumulative impact of the initial situation reinforces and exacerbates the situation. However, the theory also incorporates the idea that a vicious cycle can be broken by some action that stops and reverses the process to generate a positive or virtuous cycle of economic growth (Myrdal 1957). Sorensen (1993, 219), has used the cumulative causation concepts of vicious cycle of decline and virtuous cycle of growth to explain the changes that have occurred in country towns in Australia. His diagrams (Figure 3.1) show that “once a centre’s growth or decline is triggered by some event, the process will tend to be self sustaining”. He argues that this suggests that “a community’s prosperity is largely, though not totally, beyond its control” and lists the following as potential growth stimuli:

- the takeover of locally owned businesses by corporate capital, or the establishment of branches of well-known chains
- implementation of cost-effective business techniques. Regional centres lie higher up the diffusion hierarchy, and are often the first to receive or adopt business innovations
- local government investment in infrastructure, as well as cultural, and tourist facilities
- infrastructure investment by State and Federal Governments in improved roads, railways, telecommunications
- the staffing of government offices
- the development of educational and scientific establishments
- migration of people from the cities to country centres seeking improved quality of life.
Sorensen (1993, 221) also lists a set of negative stimuli that can trigger the cumulative decline of a country town. The negative stimuli outlined include the following:

- the withdrawal of public services
- closure of branch establishments operated by private companies
- a reduction in hinterland population occasioned by economic stress in the farm sector, out-migration, and loss of area served to larger places
- inferior local entrepreneurship or leadership, the demise of local businesses and out-migration of energetic individuals
- the closure of locally owned and managed businesses as demand sinks below the threshold needed to sustain them
- the mortality of an ageing population.

Figure 3.1 Processes of settlement growth and decline

Focus on Change

One of the key questions relating to child labour is why change has occurred to eradicate it in some countries while it has continued in others. Cumulative causation includes ideas that have the potential to explain this.

The focus on the evolutionary nature of economic change in cumulative causation theory goes back more than a hundred years to the writings of Thorstein Veblen (1898), who argued that the concern in “classical economics” to achieve equilibrium between supply and demand was based on the short-term, rather than seeking to understand the influence of change in the long term (O’Hara 1999, 130-131; Hodgson, 1992). Another early exponent of cumulative causation, Young (1928, 533), observed that “change becomes progressive and propagates itself in a cumulative way”.

Myrdal (1968, 1870) argued that “over a period of time, a change in any one of a range of socio-economic conditions tends to generate change in other conditions”. These changes can occur as a result of events largely beyond the control of governments (e.g. floods and droughts), but they can also result from policy decisions. Myrdal (1968, 1870) also argued that the complexity of the process is greater if more than one primary or basic change occurs simultaneously. Primary changes generate secondary or related changes, which generally operate in the same direction as the primary changes in terms of the improvement or deterioration in economic development. This process is said to continue in a circular and cumulative way, as the secondary changes in turn lead to tertiary changes, which affect other conditions in the social system. This includes the condition that experienced the primary change that set the process in motion.

These changes have been referred to as chain reactions by Skott (1990, 296), who argues that the pace of chain reactions varies from time to time and from region to region. However, even a process that seems to imply frequent and significant change can be impeded by countervailing forces of stagnation (Myrdal 1968, 1871). These include time and inertia, independent counteracting changes, and counteracting changes released by development. Myrdal argues that time and inertia may be significant where a country’s attitudes, beliefs and institutions play a significant role in stopping or delaying changes. These are discussed in more detail in the section on socio-economic factors. Independent counteracting changes are described as forces working simultaneously in the opposite direction to those providing the momentum for positive change. The impact of civil unrest in Sri Lanka and Nepal are also examples of counteracting change (see chapters 9 and 11 this volume).

Counteracting changes released by development, occur where secondary changes move the economic system in the opposite direction to that of a policy-induced primary change. An example of this is a new road to a previously isolated location, while opening up new opportunities, may also facilitate the movement of cheap mass-produced food and clothing into the area and undermine existing enterprises and jobs.

Thus the concept of change in cumulative causation helps to explain the continuation of child labour through the operation of countervailing forces that prevent change.
Invention and Technical Progress

One of the key elements in the cumulative causation explanation of change that has relevance for child labour is the role of inventions and technical progress in change and economic development. Young (1928, 533), in his seminal work on cumulative causation, argued that a state of continuous change occurs in industry as a result of the internal daily operations of manufacturing enterprises. Later writers followed up this idea, describing technical change as “a very complicated process emerging from the learning activities of human beings, and the application of this learning activity to production” (Pasinetti 1981, 67). Pasinetti argues that technical change involves re-organising old methods of production, making better use of new materials, improving the quality of products, inventing and applying new methods of production, producing new products, finding new resources, and discovering new sources of energy.

Technical progress is said to occur as a result of ‘learning by using and by doing’ within specialised areas (Targetti 1992, 166). Problem-solving collaboration often occurs within a firm, resulting in the development of new equipment. Argyrous (1996, 104) describes a firm that imported laser-cutting equipment to make parts for a range of industries, but through experience, began to produce the machines for its own use, and later for sale to other firms. In other cases, the collaboration occurs between clients and sub-contractors. Brusco (1989, 260) describes this relationship as being “extraordinarily rich and complex, full of reciprocal stimulation”. Thus the cumulative impact of technology on change is mainly based on in-house technology, together with “contributions from other firms and from public knowledge” (Dosi 1988, 1130).

However, Kaldor (1972, 184) argued that advances in scientific knowledge are not enough to achieve technical progress, as they need to be followed up with “repeated application” to secure improvements in design. New ideas are diffused into industry, where they create new problems to be solved (Argyrous 1996). Ricoy (1988, 732) refers to this as “the accretion of experience”. Consequently, the development of new technology is an incremental and evolutionary process, depending on past developments (Argyrous and Sethi 1996,). Rosenberg (1976,) observed that the influence of technology on change is much more a cumulative and self-generating process than the economist generally recognises while Toner (2000,) believes that much of the incremental impact of technical change on industry occurs as a result of its diffusion through vocational training.

In industries where child labour is used extensively, invention and technical change are unlikely to occur for a number of reasons. These include the following:

- Much technical change occurs as a result of efforts to reduce labour costs. Where child labour already holds down labour costs, there is little incentive to investigate and test new technical methods.

- Children in child labour are unlikely to experience the collaboration and interaction with workers in other sections of the enterprise, or with sub-contractors, suppliers and clients that
generate the type of technical progress described by Targetti (1992, 166) and Brusco (1989, 260).

- Similarly, enterprises using child labour are unlikely to experience the learning by using and by doing, as well as engage in the repeated application of particular engineering principles to secure improvements as described by Kaldor (1972).

Consequently, industries operating in a child labour context are unlikely to experience the incremental and evolutionary development described above. Thus the persistence of child labour contributes to the ossification of industry through the failure to generate both the technical skills of the workforce, and the development of new capital equipment that could have a cumulative growth impact on a country’s economy. This in turn has the circular effect of denying increased job opportunities to adults that could lift them, their families and local communities out of the vicious cycle of poverty.

Influence of History

Cumulative causation incorporates the idea that the development path is “historically conditioned”, giving it an incremental or evolutionary character (Argyrous and Sethi 1996; Setterfield 1997). Argyrous and Sethi cite as an example of this, the situation where wars cause a major disruption to supplies, creating the development of new sources of supply. Martin (1999) too has argued that economic development tends to be “path dependent”, and that chance historical events can have long-run cumulative consequences, while Setterfield (1997, 366) has argued that “the heritage of the past (is) the only truly given variable in the system”. De Ridder (1986, 45) applies this concept to a country’s capital endowment in his comment that “at any moment capital endowment is a product of history and not some gift of nature”.

A cumulative advantage for a particular location often results from the process of economic development as it occurs over a period of time. Chandler (1990, 92) has commented on the advantages of “first movers” in particular fields of business, while Arestis and Sawyer (1993, 24) have argued that “regions which are already developed enjoy comparative advantages”. Locations that are historically the first to develop frequently gain a competitive advantage over nearby centres (Scott and Storper, 1992). This occurs because the more developed regions are able to supply the needs of other regions more competitively, causing the latter to be further weakened (Kaldor 1970). Thus the advantage gained by some locations through the influence of history results in uneven development across regions and countries (Martin 1999; Hansen 1995; Molle & Boeckhout 1995). The significance of regional disparities is discussed in more detail in the section on location.

Historical influences can help explain the continuation of child labour. Just as past events (both intended and “chance historical events”) can influence the path of development in a positive way, they can also have a negative impact, either through the presence of events giving rise to disadvantage, or through the absence of developmental opportunities. For example, locations that fail to gain competitive advantage by being ‘first movers’, or fail to expand markets, increase
specialisation, and establish self-sustaining industry clusters, are more likely to generate vicious
cycles that lead to poverty and child labour. Similarly, locations devastated by chance events such as
hurricanes, floods and earthquakes, may recover slowly, or become bypassed by developments
elsewhere.

**Economic Factors in Cumulative Causation**

While both economic and socio-economic factors are included in the cumulative causation
explanation of economic growth, it is the economic factors that comprise the main base of the
theory. As outlined above, this includes the argument that the absence of these factors will result in
economic decline or stagnation. Economic factors are therefore useful in explaining the economic
bases of poverty in particular regions or countries, and the continuation of child labour. These
economic factors include demand, specialisation and division of labour, the role of markets, and the
influence of location.

**Demand**

Cumulative causation theorists see demand as one of the most significant factors in economic
growth. Where enterprises can increase the demand for their products, they can achieve economies
of scale in the production process. This allows them to become more competitive, which in turn
stimulates further demand and economic growth in a circular and cumulative way. As enterprises
grow, they employ more people, and this further contributes to increased demand. Consumption
increases as real income per head of population rises, and a greater proportion of income is spent on
manufactured goods rather than on food (Young, 1929; Kaldor 1966). Levels of income of workers
are significant in that they determine the purchasing power of consumers, which can stimulate
demand for goods in a cumulative way (Myrdal 1968).

Consumption also has an impact on demand through “consumption complementaries”, where
an increase in demand for a particular product results in an increase in the demand for another
product (Hirshman, 1958, 67). The cumulative impact of increased demand on industry
development, employment, the attraction of capital, government income through taxation, and the
provision of public services is shown graphically in Figure 3.2 below.
A high level of poverty in a country results in a reduced demand for goods and services, creating a stagnating or declining economy. Cumulative causation theory suggests that in these circumstances, governments need to look for ways of breaking the vicious cycle through policies that stimulate demand, and generate the cumulative growth needed to create jobs for adults and to reduce child labour.

Specialisation and Division of Labour

Cumulative causation theorists have argued that as enterprises grow, the production process is broken down through specialisation and division of labour into specialised divisions within the enterprises. In time, some are split off as separate enterprises to make greater economic use of specialised capital equipment and skilled labour, leading to improved economies of scale (Young 1928). This results in the creation of new enterprises and the development of linkages between vertically integrated industries in the supply chain.

New enterprises tend locate their operations close to related established firms in clusters, stimulating the development of business networks, the transfer of knowledge, the growth of pools of specialised labour, and the sharing of education and training facilities (Argyrous 2000; Steen, 2002). The hived-off specialised divisions often produce capital goods that are important for economic growth, because they “embody continually improving technologies, which improves the efficiency and quality of user industries” (Toner 2000, 28). These factors contribute to increasing returns to scale and improved competitiveness, making the locations of these clusters attractive to industries from outside the region (Porter, 1996; Martin 1999).

The continuation of child labour in many industries in developing countries greatly inhibits the specialisation and division of labour that generates cumulative growth through new firm formation. Where there is continued use of cheap and relatively unskilled child labour, there is no incentive for
manufacturers to establish specialised divisions using more capital-intensive equipment, together with the employment of higher-skilled employees, that could eventually be ‘hived off’ as separate enterprises.

*The Role of Markets in Economic Growth*

Cumulative causation theorists have emphasised the importance of the expansion of markets in stimulating economic growth, but have also warned that highly uneven trading relationships can have a severe negative impact on some economies. Kaldor (1966) outlined four stages of market development, focusing particularly on the expansion of manufacturing. In the first stage, manufacturers meet the domestic demand for products, often providing a substitute for goods previously imported. While demand can increase for a time through this process, it eventually flattens out, limited by the size of the domestic market.

In the second stage, manufacturers start to meet the demand from overseas markets while continuing to supply local markets. Increased demand maintains the positive cumulative process through economies of scale that allow the firm to become more competitive (Kaldor 1981; Targetti 1992). In both the first and second stages, the capital goods used for production are either made by the firm itself or are imported. Towards the end of this stage, domestic manufacturers develop the ability to produce the capital goods used by domestic manufacturers.

In the third stage, the production of capital goods for use in the domestic market becomes firmly established. This results from increasing demand for consumer goods in the domestic and overseas markets, together with an increased demand for the capital goods needed to produce the consumer products. This in turn leads to certain manufacturers specialising in the production of capital goods, which has a further cumulative effect on the rate of economic growth. In the fourth stage of market development, the increased demand for consumer and capital goods generates a demand for capital goods in the export market as well. Kaldor (1966) points out that an economy experiences very significant growth in this stage.

In recent debates, it has been argued that expansion into export markets does not need to proceed through stages, and that many new firms start exporting soon after their formation, that is, these firms are ‘born global’. However, research has shown that most firms proceed through a series of stages, and that the less common born global firms are generally a result of a particular set of circumstances (Argyrous 1993; 2000; Wickramasekera & Bamberry 2001; 2003). Cumulative causation theory has been used to show how this process has occurred in manufacturing firms in regional Australia (Bamberry, 2004).

Myrdal (1957) was particularly critical of neoclassical theory in its apparent unquestioning acceptance of the view that foreign trade is mutually beneficial to countries. He pointed out that unfair terms of international trade had led to increasing inequalities, and had the potential to ‘impoverish’ some developing countries. He saw unequal trading relationships as having the potential to create cumulative growth for the developed countries, while creating vicious circles of decline in the developing countries.
More recently, Wade (2005) has taken this view a step further, arguing that elements of international trade and globalisation have the potential to bring about the ‘failure’ of nation states. These elements include north-south terms of trade, including the strategies of the more economically-dominant countries and global economic multilateral organisations, the industry location decisions of multinational corporations, and the non-diffusion of modern technology to the developing countries. The impact of globalisation is not limited to the economic, through the integration of global markets, but also extends to the ideological, through the impact of the political ideas underpinning trade. Chakravorty (2003 b) argues that ideological globalisation is likely to increase the relative disadvantage of cities and regions in the periphery, along the lines suggested in cumulative causation theory.

Venables (1998) argues that neoclassical economic theory based on comparative advantage is inadequate in explaining the impact of globalisation on the location of industry and changing trade relationships, and that the impact cannot be fully explained without incorporating concepts from new economic geography and cumulative causation theory. Similarly, Skott and Auerbach (1995) argue that research data shows little evidence for the convergence of per-capita incomes across nations predicted by neoclassical economic theory. As an alternative, they suggest an approach incorporating concepts from cumulative causation theory such as increasing returns to scale and uneven development.

Kaldor (1970, 144), noted that inequalities in trade could be observed at the level of regions, similar to its operation at the national and international level. He argued that “the region that is initially more developed industrially may gain from the progressive opening of trade at the expense of the less developed region, whose development will be inhibited by it”. He believed that if it were left to market forces alone, there would be an increased tendency towards the regional concentration of industry, and an increasing disparity between industrialised and non-industrialised regions.

The emphasis in cumulative causation on the role of expanding markets for manufactured goods is relevant to the child labour issue, as some developing countries appear to have been reluctant to enforce legislation prohibiting child labour because of the threat to exports that are seen as beneficial for economic growth (see chapter 8, this volume). However, while there is some short-term benefit from the income earned, the long-term benefit is questionable when unfair terms of trade ‘impoverish’ the people as suggested by Myrdal. Governments need to monitor who really benefits from exports based on child labour. In many developed countries, lower-priced imports from developing countries are often ‘marked up’ substantially by importers and retailers who may make more from the product than the country of origin. Such a situation entrenches low wages, poor working conditions, and child labour in some developing countries.

Location Factors

Cumulative causation draws attention to the locational advantages resulting from specialisation, and the expansion of markets that enable some centres and regions to grow at the expense of others.
This results in the development of regional disparities in terms of general economic growth, income per head of population and job opportunities. Hirschman (1959, 555) has described this process as “polarisation”, where industries become concentrated in some centres because of the benefits occurring through economies of scale. Myrdal (1957, 26) has described such locations as “growth poles”.

The concentration or polarisation of industry has also been described in terms of ‘clustering’. Porter (1990) argues that there are four factors that contribute to industry clusters and their competitive success in international markets: availability of factors of production; sophisticated consumer preferences in domestic markets to stimulate the competitiveness of firms; linkages with related industries that share common technologies, basic inputs, intermediate goods, logistics and customers; firm strategy, structure and competition in domestic markets. These factors stimulate the innovation and competitiveness needed for success in international markets.

Hanson (2003) makes similar observations, pointing out that key industries ‘congregate’ in particular locations because of advantages such as the existence of pools of skilled labour, easy access for suppliers, faster communications and availability of transport. The drawing power of growth poles or clusters weakens surrounding centres that cannot match their advantages, and are therefore unable to reach a ‘take off’ point for economic growth. It is possible for the surrounding centres to gain some benefits from the more advanced centres through what Hirschman (1959, 555) calls “trickling down” effects, and which Myrdal (1957, 26) calls “spread effects”. Chakravorty (2003a) has observed elements of this process in regional India in recent years. He argues, on the basis of his district-level research data involving the analysis and mapping of the concentration of five industry sectors, that there is evidence of inter-regional divergence and intra-regional convergence of the type suggested by cumulative causation theory, leading to what he refers to as “concentrated decentralisation”.

Cumulative causation writers argue that inter-regional inequality of growth is therefore an inevitable concomitant of growth. Hirschman (1959, 555) highlights the economic inequality between regions and countries through the use of the terms “core” and “periphery”, where the core contains the industrial centres, and the periphery contains the less-industrialised areas. The concept of polarisation helps to explain the persistence of poverty, in that people living in the periphery have fewer job opportunities, lower incomes, and limited access to services (Hanson, 2003). Peripheral centres are often unable to generate economic growth, and remain stagnant, creating a cumulative vicious cycle of poverty and its associated effects.

Another related concept outlined by Hirschman (1959, 557) that helps explain the existence of the poverty and child labour is “dualism”. He describes this as occurring “where the hyper-modern exists side by side with the traditional, not only in techniques of production and distribution, but also in attitudes and in ways of living and doing business”. He comments that one of the main characteristics of dualism is the development of two separate wage systems for each of the labour markets in the dual economy. Despite labour being cheaper in the traditional sector, it is generally not effective as a means of attracting industry, and restoring some balance between the core and the periphery. Even those who are able to obtain some employment find that these jobs are often in what Hirschman called “traditional” rather than “modern” industries. Their income is generally
much lower than that of workers in the growth centres. The continuation of the dual labour market makes it difficult for people to escape the resulting poverty trap.

Without the new firm formation resulting from specialisation and division of labour as predicted by cumulative causation theory, the locational clustering of related enterprises, also predicted by the theory, does not occur. Not only does this rob high-poverty centres of job-creating new enterprises, it also exacerbates the development of regional economic disparities that contribute towards the use of child labour. There is also less likelihood of the development of growth poles as described by Hirschman, where ‘trickle down’ or ‘spread effects’ can generate economic benefits for the surrounding less-developed areas.

**Socio-economic Factors**

In addition to the purely economic factors underpinning the theory of cumulative causation, socio-economic ones have also been included to explain the process. Many of these factors are difficult or impossible to incorporate into mathematical models, one of the reasons why they are generally neglected in neoclassical economic theory. Myrdal (1968, 1860), was critical of this neglect, commenting that “economic theory has disregarded these so-called non-economic factors and kept them outside the analysis”. He argued that socio-economic factors were “among the main vehicles for circular causation in the cumulative process of economic change” (1958, 30).

Myrdal (1944) used cumulative causation not only to describe the economic situation of developing countries, but also to describe the economic and social circumstances of blacks in mid-twentieth century USA. He argued that at the time he was writing, the combination of poverty, discrimination, lack of education, low self-esteem, poor nutrition and health all reinforced one another in a circular and cumulative way to maintain the disadvantaged position of American blacks. More recently, Lyon (2004) has drawn attention to the way in which Myrdal used theoretical concepts of cumulative causation to explain the causal institutional effects of racism.

The case for the inclusion of socio-economic factors was also strongly argued by Kaldor. In his study of Chile, he claimed that the main obstacles to the country’s economic development were not resource-based or technical, but political and social (Thirlwall, 1987). Skott (1990) strongly supports the inclusion of socio-economic factors by Kaldor and Myrdal, arguing that they are important in bringing about changes in attitudes, behaviours and preferences, and in influencing the rate of change in an economy. Martin (1999, 75) argues that “it is precisely the social, institutional, cultural and political embeddedness of local and regional economies that can play a key role in determining the possibilities for, or constraints on, development”.

Myrdal (1968, 1862) outlined a number socio-economic conditions under the heading of “levels of living”, which, he argued, had a significant impact on economic growth. These include:

- quantity and quality of education and training facilities
levels of health and quality of housing
quantity and quality of cultural facilities.

The quantity and quality of education and training facilities have a direct impact on competencies in the workforce, as well as on research and development capacity. The health and housing conditions of a country's working population have a major influence on their level of participation in the workforce and on their levels of output. Cultural facilities are also included, as they are seen as an important contribution to the quality of life of a community. In cumulative causation theory, it is argued that these conditions contribute to “integrative growth”, which is depicted as “not merely a process of material enhancement, but is a civilising influence as well” (Jones 1995, 107).

Myrdal (1968, 1862) also argued that, just as living conditions impact on a country’s ability to sustain economic growth, so too do the “attitudes towards life and work” of the people. He provides a list of these attitudes which are often neglected in traditional economic theory:

- levels of work discipline
- punctuality and orderliness
- beliefs and superstitions
- levels of alertness, adaptability and ambition
- general readiness for experiment and change
- attitudes towards manual work and co-operation
- attitudes towards authority
- attitudes towards deliberate and sustained birth control.

These factors tend to be taken for granted in most developed countries, but their absence or ‘negative’ character in some developing countries can have a major negative cumulative impact on economic growth. Skott (1990) noted these positive and negative influences, arguing that they can favour change in some economies at particular points in time, while they can act as a constraint to economic growth at other times in other economies where they are slow to change. The impact these social factors have on circular and cumulative growth are useful in explaining the presence of poverty and child labour in developing countries.

Of particular significance is the issue of individual and community beliefs and attitudes. Where families face severe levels of poverty, and adult members of the family are unable to obtain employment, it is often believed that there is no alternative other than to send some of the older children to work. Cumulative causation suggests that holding such attitudes would have the negative effect of keeping the family in a state of poverty. The low income earned by children is generally not sufficient to lift families out of poverty, and the children do not gain the education and
training needed to provide future job opportunities outside the traditional low-wage sector of the dual labour market.

Also, as Pinto (chapter 8, this volume) has pointed out, child labourers are usually dismissed once they become adults, forcing them to join the ranks of the unemployed. The low-level skills they have gained are often insufficient to allow them to obtain further paid employment. Hence, holding beliefs and attitudes that there are no alternatives to child labour often results in a continuation of the vicious cycle of lack of education and training, leading to unemployment and continuing poverty, which in turn can lead to children in the next generation entering child labour.

Other aspects of individual and community attitudes relate to the value placed on education in general, the education of girls in particular, the status accorded to teachers, and the amount of support individuals and communities are prepared to give their schools. Where education in general is not valued highly, or where it is not regarded as necessary for girls, poor education can contribute to the vicious cycle leading to poverty and child labour.

Community attitudes are particularly important in relation to the worst forms of child labour. Although governments have been signatories to ILO Convention 182, and have developed programs to eliminate the worst forms of child labour, progress has been limited. Cumulative causation suggests that one of the causes of this may be complacent attitudes on the part of government and the community, and that changes in attitudes may be needed to ensure real progress. This will be discussed in more detail in the section on policy.

Several of the contributors to this book have commented that even where families can afford to keep their children at school, socio-economic factors such as the availability and quality of education are important in influencing parents to encourage their children to complete their schooling, and in influencing children to want to stay at school. This includes the adequacy of the facilities, the quality of the teachers, and the appropriateness of the curriculum in meeting the current interests and future needs of the students in terms of preparation for work or preparation for further education and training. Children leaving school early for these reasons risk being caught up in the vicious cycle described above.

Also, as a number of contributors have indicated, for success of programs that seek to rehabilitate children who have been involved in child labour, there needs to be appropriate education and training facilities to re-integrate these children into schools, or provide suitable alternative education and training to prepare them for future work. It is generally inappropriate to return these children to the schools they left, as the classrooms no longer meet the requirements of their age, life experiences and future needs. Access to good-quality education is therefore a significant element at several levels in contributing to breaking the vicious cycle and creating a positive one that lifts people out of poverty.

Health and housing have also been included in cumulative causation as socio-economic factors influencing development (Myrdal, 1968). Lack of adequate housing and health facilities can lead to long-term poor health for families. Where parents are unable to work for health reasons, children may have to enter the workforce, and where children suffer long-term poor health, they may miss lengthy periods of schooling, and may eventually withdraw from school completely. A related health issue is that of attitudes towards birth control. Large families in low-income groups can exacerbate
the problems of poverty, poor education and child labour. To sum up, the emphasis on socio-economic factors in cumulative causation as outlined above, contributes to its value as an explanatory theory for child labour and as a basis for policy.

**Cumulative Causation as a Basis for Policy**

Most of the material in the previous sections has focused on how cumulative causation can provide an explanation for the existence and continuation of child labour in developing countries. The following material seeks to show how the theory can provide a basis for policies to reduce and eliminate child labour.

While it is unusual to incorporate political influences in the form of government policies as a variable in theories of economic growth, Myrdal (1968, 1864) argues within a cumulative causation framework that there is a case for doing so. He believes that policy conditions represent “induced changes” which influence most of the other variables. He goes on to say that “for the practice of planning, this implies the need for policies aimed at changing social conditions, and the futility of relying on the indirect effects of changes induced by purely economic conditions”. As Argyrous (1993, 117) points out, “where the components of an economy are interdependent, there is potential for system-wide inertia and overall stagnation that may be difficult to overcome on a sectoral basis”. This suggests that there may be a need for government intervention.

Myrdal (1968) argued that political and institutional influences of importance for local economic development include the following:

- the level of expertise of institutions created to foster trade and employment
- the nature and authority of government agencies
- the effectiveness of government policies
- the standards of efficiency and integrity in public administration
- the effectiveness of provincial and local government authorities
- the extent and quality of voluntary organisations

The co-ordination role of government in planning for economic growth in developing countries was strongly emphasised by cumulative causation theorists such as Rosenstein-Roden (1957) in the 1950s and 1960s. Phillips (1967, 20) shows how institutions created to co-ordinate the development process play a significant role in a country’s economic development in the model outlined in Figure 3.3. A number of pre-conditions set the scene for reform and institution building. These give rise to needs that in turn lead to actions including problem solving, reform programs and implementation of change. The fourth element of the model comprises the “contributions” or outputs of the institutions in terms of economic and social development.
Political influences were incorporated into a cumulative causation model of growth and decline of country towns in Australia by Sorensen (1993), as outlined earlier in Figure 3.1. Examples mentioned by Sorensen of political action that can trigger this process in a positive way include local and central government investment in infrastructure, the provision of public services such as education, and the staffing of government offices in regional locations.

Cumulative causation emphasises the need for planning and policymaking in economic development. This view was strongly supported in the writings of earlier theorists such as Myrdal and Rosenstein-Roden. Both argued that development should not be left to market forces and chance events, as plans, policies and programs were needed to integrate socio-economic and economic changes. Observation and analysis of cases of growth and decline led them to believe that government policy intervention was needed to break vicious cycles of decline, and to generate cumulative cycles of growth.

Later writers supported this view, arguing for deliberate industry policies involving both socio-economic and economic components to generate industry clusters to stimulate economic growth. Mayhew (2001, 239) argues that government needs to be seen as “activities carried on by institutionalised personalities” on the lookout for opportunities to serve the common good. She argues that the formulation, implementation and modification of public policy (purpose) need to be undertaken within a policy analysis framework underpinned by the concepts of institutionalised personalities, human agency and cumulative causation.

While there is a general consensus on this view, there are some differences of opinion on the extent to which governments should intervene in economic development. Wickham and Hanson (2002, 7) argue that “government is most successful when it stays at a distance, but is willing to
provide expensive infrastructure within the scope of ‘chance’, the ideas of the entrepreneur who takes advantage of chance events, and the ‘culture’ of the region”. However, Porter (1996) argues for a more pro-active role on the part of government. He argues a case for policies for regional growth that promote specialisation, upgrading and trade among regions. He believes that cluster formation can be encouraged by providing specialised infrastructure, training facilities and institutions in locations that are beginning to experience some industry concentration. Crewe and Forster (1993) have outlined a case study of this process in Nottingham in the United Kingdom, where there has been public sector involvement in collective service provision for the lace industry.

Similarly, Lorenz (1992, 202) comments that there is the potential for “political entrepreneurs” to persuade producers “that they would benefit from independently providing tangible collective goods such as apprenticeship training or collaborative research and development”. He also sees a role for public institutions in ensuring some redistribution of resources to foster economic development. Others observe that in some regional economies, public sector provision of support for training, technology, infrastructure, investment and research and development help explain the success of manufacturing industries.

Matthews (2002) also supports this view, arguing that publicly-funded institutions and facilities that promote exchange between production and consumption have a significant influence on innovation in industry. Argyrous (2000, 65) argues that government action needs to extend to creating the conditions that encourage firms to expand markets along the lines depicted in Kaldor’s four-stage model described earlier in this chapter. He argues the following:

The starting point is a large domestic mass market, which ultimately is rooted in gradually improving living standards for the bulk of the population. Thus by promoting real-wage growth over a time-frame that allows producers to meet demand by increasing capacity, the government can expand the size of the local market. Similarly, by redistributing income in an equitable manner, the government can ensure that a greater proportion of the population can access markets from which they were previously excluded.

The view that public sector intervention in economic growth is important has also been raised in terms of local government involvement. Jones (1993, 36) argues that local authorities can influence industry location because they have some control over land use within their areas, while Beer et al (1994, 87) have also drawn attention to “local leadership and community entrepreneurialism” as a factor influencing the regional location of manufacturing. Local authorities have also become involved in local employment programs in periods when there are high levels of unemployment, or when specific groups are over-represented among the unemployed (Bamberry and Macklin, 1987). Similar observations have been made in the United Kingdom (Armstrong and Izadi 1994), in the United States (Levy, 1992), in Canada (Reese, 1992) and in the European Community (Keating and Jones, 1994). Despite the differences in viewpoints, the overall consensus in writings with a cumulative causation orientation is that some form of government intervention is justified as a means of stimulating economic growth.
The emphasis in cumulative causation on political and institutional influences on economic growth provides a basis for policy on child labour in developing countries. The theory supports many of the policies and programs currently being proposed and implemented, providing a theoretical justification for them. It also provides an explanation as to why some of those policies have not been as successful as anticipated, and it suggests how the policies might be implemented more successfully.

The countries covered by contributors to this volume have generally recognised the need for government intervention, and have generated a range of plans, policies and programs. These range from broad integrated plans such as the National Policy and Plan of Action to Combat Child Labour in Pakistan (see chapter 10, this volume), and the Ten Year Action Plan for Children in Nepal (see chapter 9 this volume), to the narrower, more specific policies and programs of particular government departments and agencies, as well as NGOs and international agencies such as UNICEF and the ILO. Examples of the more specific policies and programs have been outlined Bangladesh, India Sri Lanka (see chapters 6, 8, 11, this volume).

Despite the development of comprehensive plans and programs to eradicate child labour, several of the contributors commented on their limited success because of a number of problems. These include the lack of co-ordination across the various agencies involved, and the lack of financial and human resources for the programs, particularly staff resources, inadequate training for staff, especially those involved in regulatory roles requiring legal knowledge, and the lack of appropriate education and training facilities for children withdrawn from child labour, particularly the worst forms of child labour (see chapters 8, 9, 11, this volume). An issue raised by most contributors is the need to strengthen the institutions charged with the responsibility to enforce laws and to implement policies and programs. Concepts from cumulative causation on the role of institutions may be of value in this area.

In some cases, this seems to indicate the need for greater commitment to change of the type described in cumulative causation theory. As Pinto points out, “the problem of child labour cannot be resolved if there is a lack of political will and enforcement”. This requires a concerted effort to break the vicious cycle of decline, and to reverse the process towards a positive cycle of improvement in socio-economic conditions. Examples of this in Pakistan and Bangladesh are the programs to implement income-generating schemes for poor families as part of the broader strategy to eliminate the worst forms of child labour. This highlights the value of cumulative causation in emphasising the need to incorporate socio-economic and political factors, in combination with economic ones, to bring about change.

The problems outlined above also indicate a need for better implementation of plans and policies. A strategy based on cumulative causation theory is to take an incremental approach to change. While it is appropriate to have broadly-scoped long-term plans, there is also a need for a series of small-scale plans that are achievable in the short-term, and which have a positive cumulative impact on solving the problems associated with child labour. An example of this approach is the National Policy and Plan of Action to Combat Child Labour of Pakistan. While there are long-term objectives such as full implementation of the law on the eradication of child labour, universal primary education and expansion of social security, there are also short and medium-term objectives.
As Munir and Mangi point out, the short-term objectives include awareness raising, community mobilisation, analysis of the situation and withdrawing children from the worst forms of child labour, while the medium-term ones include institutional capacity building, strengthening inspection services, and providing education and training for working children. An incremental approach has also been suggested in Bangladesh by Hasan in his comment that “reduction of child labour should be gradual, systematic and sustainable rather than running after numbers and delivery rates, which many of the projects follow”.

Similarly, in relation to India, Pinto has pointed out that “Given the economic situation, eradication of child labour is inevitably progressive” and that “in the interim, ... modest targets should be emphasised.” In Nepal, the long-term plan has been divided into a number of five-year plans to indicate priorities such as the elimination of the worst forms of child labour. Use of cumulative causation as a policy guide thus highlights the need for an incremental approach to change, combined with setting priorities within a range of economic, socio-economic, political and institutional areas in order to stop and reverse major economic and social problems such as child labour.

**Conclusion**

The aim of this chapter was to show how the theory of cumulative causation could be used to explain the occurrence and persistence of child labour in a number of developing countries in Asia, and how the theory could be used as a basis for policy to achieve its elimination. Although the authors of the other chapters in this book have not referred to cumulative causation specifically, they have referred to the cumulative effects of poverty as a major cause of child labour.

The chapter began by outlining how the economy of a particular region or country can either generate a cumulative cycle of growth or a vicious cycle of decline that tend to become self-reinforcing unless there are actions or events that stop and reverse them. The theory also includes the idea that change is generally incremental or evolutionary, but can be impeded by countervailing forces of stagnation such as time and inertia, independent countervailing changes, and counteracting changes released by development. These were shown to have a negative impact on the changes needed to reduce poverty and child labour.

Cumulative causation also draws attention to the positive incremental influence of invention and technical progress in change and economic development through interaction and collaboration between workers on the shop floor and with clients. This is reinforced through learning by using and through problem-solving, enabling new ideas to be gradually diffused into industry. The use of child labour was shown to reduce opportunities for this process, providing enterprises with little incentive to adopt technical change to reduce labour costs and improve productivity. It was also shown that historical events and the path-dependent nature of economic development can provide advantages to some locations while disadvantaging others. Locations that fail to gain such economic advantage are more likely to remain affected by poverty and child labour.
Cumulative causation was also shown to provide an explanation for child labour through economic factors such as the influence of demand, processes of specialisation and division of labour, the operation of markets, and the influence of location. Increased demand enables firms to achieve the economies of scale needed for competitive advantage and further growth, as well as stimulating greater specialisation and division of labour leading to the hiving off of specialized activities in new enterprises. A vicious cycle of decline can occur when a lack of demand reduces the level of economic activity, lessens opportunities for job creation, and leaves many people in a state of poverty.

The chapter also showed that an economy is unlikely to overcome the problems of poverty without the expansion of markets from the local and regional to national and international levels. However, developing economies can remain relatively impoverished where unfair terms of international trade, or unfavourable decisions of multinational corporations, reduce opportunities for economic growth. Cumulative causation concepts such as industry agglomeration, polarization, growth centres and industry clusters help explain why industry and other economic activity tend to become concentrated in some locations and not in others.

Despite the benefits obtained by the latter centres through ‘spread effects’ and ‘trickling down’, they tend to remain at an economic disadvantage, creating inequality that persists over time. This inequality between locations has been explained in terms of ‘core and periphery’ and ‘dualism’. Core and periphery are mainly used to describe the unequal distribution of wealth and power at the international level, while dualism tends to be used to explain the existence of modern and traditional economic activities operating side by side in a single country, generating wealth for some while others remain in poverty.

Socio-economic factors included in cumulative causation theory contribute to the explanation of poverty and child labour. These factors include individual and community beliefs and attitudes that lead to an acceptance of child labour, and which fail to generate the political will needed to implement and enforce legislation outlawing it. Other attitudinal constraints include individual and community values placed on education in general, and on the education of girls in particular, the status accorded to teachers, and community support for schools.

Other socio-economic factors identified included the availability, affordability and quality of education, the adequacy of school facilities, the quality of teachers, and the appropriateness of the curriculum, for both normal programs, and those designed for children being rehabilitated. In addition, inadequate or inappropriate provision of health and housing were identified as contributing to poor educational and socio-economic outcomes, resulting in the continuation of poverty and child labour.

The final section of the chapter showed that cumulative causation theory draws attention to the need for government intervention to achieve economic development, acting as ‘entrepreneurs’ and taking advantage of ‘chance events’. Policies suggested include providing infrastructure and training facilities, supporting research and development, encouraging cluster formation, and assisting the expansion of markets. Others have argued for some redistribution of resources and incomes so that a greater proportion of the population can participate in the economy. The resulting increase in demand would lead to cumulative economic growth and, in turn, reduced poverty and child labour.
An incremental or evolutionary implementation of policy is implied in cumulative causation, where short-term targets are incorporated within long-term plans, and where institutional capacity-building is promoted. To sum up, cumulative causation appears to have a number of advantages in explaining the economic and social causes of child labour, and in providing a theoretical base for policies to help in its reduction and elimination.


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