

Growth and Structural Change of the Finnish Economy, 1860-1980 A Development Theoretical Approach

Hans C. Blomqvist*

In this paper the long-run development of the Finnish Economy is analyzed, utilizing two well-known theoretical frameworks: Lewis's "dualistic" model, and Chenery's "patterns of growth" approach. The actual development partly seems to follow the route envisaged by Lewis, in that the restructuring of the economy, due to mobilization of surplus rural labour, could take place at constant or slowly rising real wages. After the war the rate of increase in wages has been high, however, despite a continuing surplus of labour. The structure of the Finnish economy seems, by and large, to have followed that of the average economy. The notable exception here is the primary sector, which has been much larger than the average. The importance of the forest sector is one reason for that, and so is the evident "rural bias" in the Finnish economic policy. Towards the end of the period a convergence of the Finnish and "normal" figures seems to occur.

I. Introduction

During the last few years there has been a vivid discussion about structural adjustment problems concerning both the necessity of such changes taking place in a changing world and the problems they may cause. Although these discussions have mainly focused on short run problems, emphasizing the importance of either adaptability to a changing external environment, that is "international competitiveness" in a wide sense of the word, or adjustment to domestic policies (for a survey, see Edwards & Wijnbergen, 1989), there are also forces of a more secular nature connecting economic growth, industrial structure, and income distribution etc.

* Swedish School of Economics and Business Administration.

share of foodstuffs in consumption tends to diminish along with an increasing income level) and sectoral productivity differentials. Today the work of Clark and Fisher is most interesting as starting points for several research traditions, which will be drawn upon here when the long run sectoral development of the Finnish economy is considered.

II. The Dualistic Approach

One line of work concerning the relation between economic growth, capital accumulation, and structural change starts out from the idea of the *dualistic* economy. The economy is conceived as consisting of a primitive, tradition-bound subsistence sector and a "modern" sector. The pioneer of this "research programme" was Arthur Lewis (1954) who construed a two-sector model for explaining the transition from a primitive agricultural economy to a modern industrialized one. Lewis' model, now a standard feature of any textbook in development economics, was subsequently developed and modified by other authors, particularly John Fei and Gustav Ranis (e.g., 1964). The basic idea remains, however. In the traditional sector the marginal product of labour is assumed to be approximately zero, and labour can thus be transferred to other sectors of the economy without a loss of agricultural output. The income level in the traditional sector is determined by custom (since the "wage" rate cannot reasonably be equal to the MPL). The consequence of this set-up is, however, that the modern sector can have all the labour it wants at a wage level marginally higher than that in the traditional sector. The supply of labour is, thus, infinitely elastic at the prevailing wage level.

Lewis model concentrates on what will happen in the modern sector. Figure 1 highlights the argument, illustrating the labour market, and indirectly, the growth of the modern sector. The demand curve (identical with the marginal productivity curve) for labour is originally D_1 . The optimal quantity of labour is L_1 and the total production the area $OABL_1$. Now, the model is dynamized by assuming that all capital incomes (wAB) are invested into new real capital. This in turn increases the marginal productivity of capital, the demand curve for labour shifts out and the demand for labour increases to L_2 . This process is supposed to continue until the excess supply of labour is used up and the wage level begins to rise. The system ends up in a neoclassical type of general equilibrium.

The Lewis model has been criticized as an inadequate description of the development process for several reasons (see e.g., Toye, 1987, pp. 30-31, Todaro, 1988, pp. 210-211). In spite of its simplicity this model still captures essential traits of the long-run restructuring and growth of

Interesting enough, Mickwitz (1987), evidently independently from Lewis, interprets the Finnish experience much in accordance with the Lewis model in his article on structural change and unemployment: "The changing technology in the agricultural sector at first rendered an increasing part of the labour force in that sector superfluous. Hence, we have a push effect here. Simultaneously a growing and labour intensive industry absorbed the major part of this labour surplus, which in turn amounted to a "pull effect." Personally I am inclined to believe that the push effect was the stronger of the two. That is why the expansion of industry did not lead to too strong wage increase which would have hampered growth? As late as between 1960 and 1970 the share of the population dependent on agriculture fell from 31.7% to 17.6%, or in absolute numbers, about 600,000 individuals. These figures decreased further from 1970 to 1980 to 9.2% or 370,000 individuals (Mickwitz, 1987). Although difficult to show conclusively one factor behind the large employment share of agriculture until quite recently, was probably one of political economy, and related to the leading role of the Agrarian Union as a political party (Haavisto & Kokko, 1989).

The causal relations have certainly been more complicated than what the simple Lewis model suggests. As some of its critics have noted it is not consistent even with crude facts that the modern sector attracts labour only at a rate consistent with its own expansions. One of the most important problems of economic development has, as a matter of fact, been the inability of the industry to absorb the labour left without productive employment when the old social structures disappeared (cf. Comélieau, 1985). Also in the case of Finland the push effect has been too strong for permitting the resulting excess labour to be fully absorbed by the urban sector. This rejection was caused perhaps primarily by the increasing average productivity in agriculture together with a slow increase in the demand for foodstuffs. From time to time emigration has been a security vent. This does not mean, however, that the emigrants have always originated from the pool of concealed unemployment in the countryside. In fact, considering post-war emigration, a sizable part of them have been industrial workers which in turn were replaced by former rural labour (cf. Blomster, 1983, p. 31). Quantitatively, postwar emigration was important only in the 1960s. The emigration to America at the turn of the century was, however, much more important both absolutely and relatively (Hjerpe, 1989, p. 96).

Another point made by the critics of Lewis' model was the fact that industry has tended to adopt more and more capital intensive technology with a limiting effect on its role as employer as a consequence. During the process the general income level has risen, however, which has permitted

explanation can be an increasingly heterogenous demand for labour: in spite of a continuous excess supply of labour in general the shortage of more skilled labour has been cronical.

Over the whole process the relative importance of the agricultural sector has been shrinking, as shown below, figure 3. The rate of capital accumulation again has been on the rise as figure 4 demonstrates. This is

Figure 3
Relative Employment Share (%) of Primary Sector

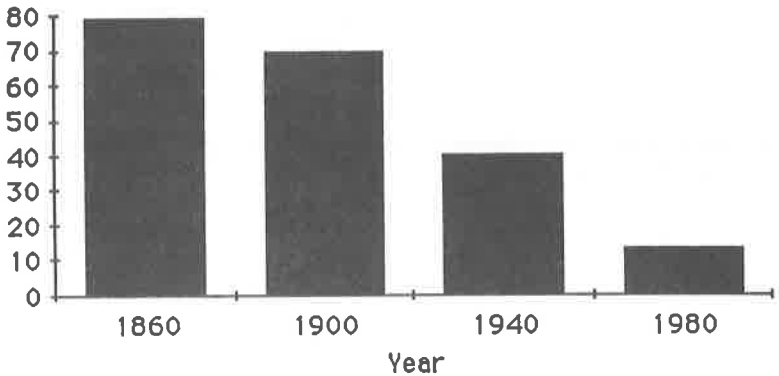
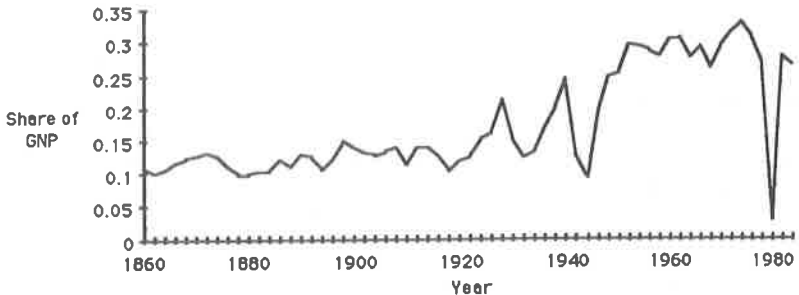


Figure 4
The Relative Share of Investments in GNP



² There is a free labour market comprising the five Nordic countries, Finland, Denmark, Iceland, Norway, and Sweden, established after the war.

³ This argument is not quite convincing. It is easy to conceive that unions can influence the *nominal* wages, as well as *relative* wages between different industries or occupations. That does not necessarily mean that they can influence the *general* level of real wages, however.

tum, that is it has been used for explaining possible reasons for the patterns emerging out of the empirical work.

The work within the "growth with structural change" paradigm conveys a picture of the economic development which is much richer, albeit also theoretically looser than the one based on a simple relation between capital accumulation and economic growth or Lewis' two-sector model. Accumulation of physical and human capital is also in this paradigm necessary for the development of an economy but additionally a thorough restructuring of production, demand, foreign trade and resource utilization takes place. Furthermore, several social and demographic variables are involved, such as urbanization, nativity and mortality, educational opportunities etc. Although they aim at inducing a general development pattern, Chenery *et al.* distinguish between small and large economies, and among the former, economies with a primary and industrial orientation, respectively. Particularly for the small economies interaction with the surrounding world is important. What they did not find was any clear distinction between today's developed economies and the developing countries but "that the changes in structure that accompany economic growth are a transition from a low-income agrarian economy to an industrial urban economy with substantially higher income" (Syrquin & Chenery 1989).

When we consider the overall growth of production, the average rate in Finland for the period 1860-1985 was 3.2%. Before the World War II the corresponding rate was somewhat lower, 2.8%, while it was about 3.8% after the war. In spite of cyclical variations the GNP-level has grown fairly steadily, the only clear exceptions, not surprisingly, being the two world wars. Today's developed countries, in fact, all reveal very similar growth rates in the long run. These growth rates are, however, very high as a historical phenomenon over a secular perspective (Hjerppe 1989, p. 41).

Figure 5 gives a general picture of the development of the crude production structure in Finland between 1860 and 1980, compared to Chenery's and Syrquin's result for the "typical economy."⁴ Chenery's income levels, 200, 300, 400, 500, 800, 1,000 and 1,500 dollars (at 1964 prices) correspond approximately to the Finnish income levels of 1860, 1889, 1906, 1924, 1938, 1951, and 1961.

⁴ Figure 5 is based on calculations for an economy somewhat bigger than Finland (Chenery & Syrquin, 1975, pp. 20-21). The general tendency in these results is not, however, sensitive to the size or orientation of the economy.

Figure 5

The Relative Share in GNP in the Primary (a),
Secondary (b), and Tertiary (c) Sectors

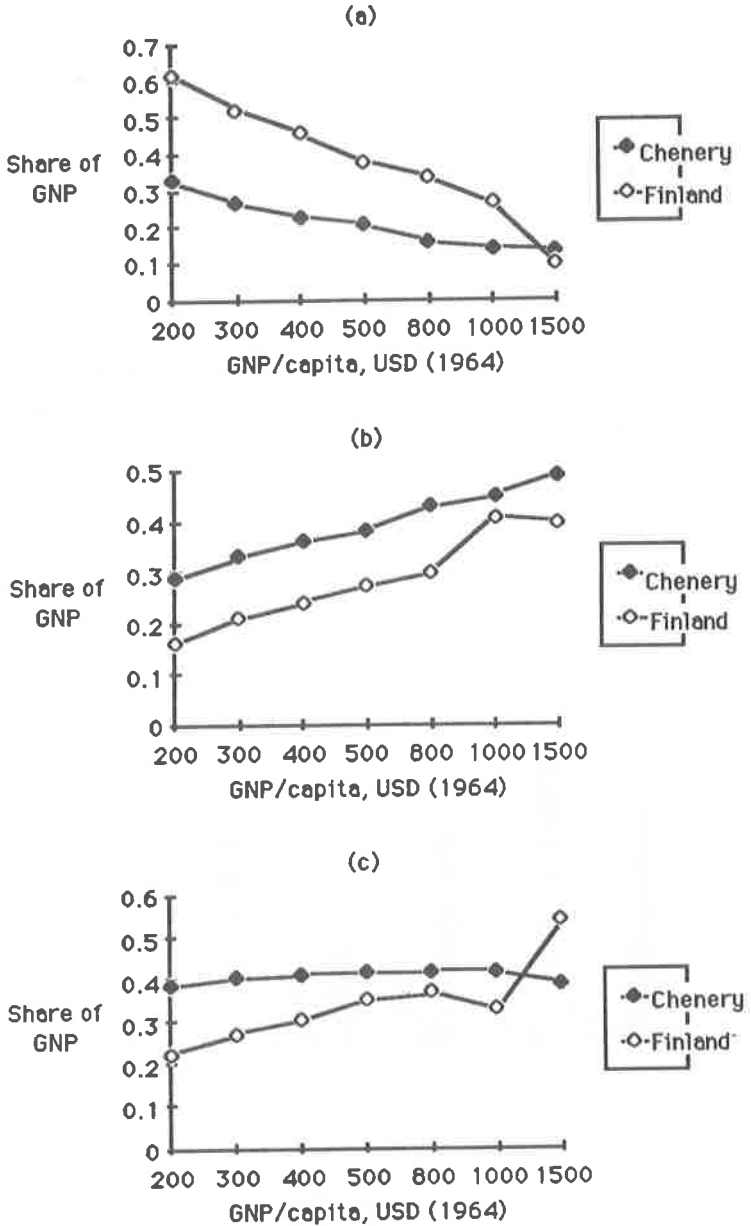


Table 1
THE STRUCTURE OF PRIVATE CONSUMPTION, 1920-1981, %

	1920-21	1955-56	1981
Food, beverages, tobacco	55.50	41.01	25.1
Clothing and footwear	12.88	14.84	6.6
Housing	13.43	10.30	15.9
Fuel and power	4.34	4.45	4
Household equipment and services	3.23	5.56	5.8
Medical care etc.	3.24	6.07	2.1
Other	7.38	17.75	40.5
Total	100.00	100.00	100.00

about half of that table. This has happened in spite of the fact that the cost of processing and transport must have increased very considerably during this period. In comparison with Chenery's and Syrquin's "normal economy" the share of foodstuffs is very high, however, in spite of the fact that beverages and tobacco are excluded from the latter figures.⁶ This is probably a reflection of the very high relative food prices in Finland in combination with low price elasticity of demand. The share of clothing and footwear has decreased as well, housing being the only "necessity item" the share of which has remained rather stable. (In the latter case the quality of the "goods" has changed considerably, however. The average size of dwellings has increased considerably as well). If we add the shares of all "necessary items" (food etc., clothing, housing, and fuel and power) in private consumption we find that their total share was about 86% in 1920-21, 71% in 1958-59 but only 52% in 1981. The residual category, "other," reflecting mainly expenditure for leisure and recreation, has expanded very significantly, being now more than 40% of private consumption.

The transformation from an agricultural to an industrial and service oriented economy is typically accompanied by structural changes in foreign trade as well. On a low level of development exports are usually dominated by primary goods while imports again has a large content of consumer and capital goods. Along with the increase in the GNP an increasing share of manufactures can, as a rule, be seen in exports while in

⁶ This does not change the general picture, however: the share of beverages and tobacco in the whole group has been only 10 odd per cent.

of this article. For a critical discussion, see e.g. Colman & Nixson (1986, pp. 309-312). In the case of Finland the industrialization "strategy" (it has seldom been formulated very explicitly, e.g. Haavisto & Kokko 1989) can, with some qualifications, be seen as a variant of the export-oriented model. It differs from many of its modern counterparts, e.g. the South-East Asian NICs, (Blomqvist 1990) in the sense that it was firmly based on domestic natural resources, however. In that there are clear similarities to the other Scandinavian countries, in spite that Finland lagged behind the rest of Scandinavia until the very recent years (cf. Haavisto & Kokko 1989). The export-oriented policy was not a pure one either. Non-forest based industry and, above all agriculture, was rather protected between the world wars, particularly in the 30s, and again, after World War II (cf. Haavisto & Kokko 1989⁷). A gradual liberalization has occurred after the mid 1950s.

The fundamental prerequisites for foreign trade to be an "engine of development" are working transport and communication facilities and an institutional framework (regulations etc.) providing sufficient incentives. These preconditions became fulfilled towards the end of the nineteenth century. Transport by land, rail, and sea had become faster and more efficient. At about the same time the communication devices, such as the telegraph and the telephone were developed. A general liberalization of the economic climate was helpful here.

As mentioned above, the trade patterns of different countries seem rather heterogenous, although some common traits can be found (cf. Chenery & Syrquin 1975, p. 40). An important explanatory variable is the natural resource endowment (ibid., p. 68). In the case of Finland the ample availability of high-class raw material for the wood processing industry has been the reason for the dependence of this country on her exports of relatively unprocessed goods. (In fact this is partly true even today, although the forest products exported today are somewhat more sophisticated than they used to be.) On a general level the results of Chenery and Syrquin hold for Finland, too: The export share of primary products decreases and that of manufactured products increase over time (cf. Syrquin 1988, p. 234). Table 2 provides a picture of the Finnish development from 1860 on.

To begin with, unprocessed agricultural and forestry products dominated, having about one third of the total exports. Gradually the

⁷ Haavisto and Kokko (1989) argue in favour of the import-substitution hypothesis. While their analysis is convincing in itself, the export-oriented forest industry has been such a dominating "engine of growth" in Finland that this author would prefer the label "export-oriented."

IV. Concluding Remarks

Both theoretical and empirical work on the growth-structural change nexus is usually characterized by abstracting from the *problems* that such changes may cause. One reason for this is perhaps the long time perspective which renders *individual* consequences (which, by and large, are the ones arousing popular discontent and which politicians act upon) insignificant. In such a case a redistribution of incomes may, for instance, be a consequence of the structural transformation but will not be an evident cause of conflicts, which corresponding redistributions most certainly are in the short run.

In a piece of work that concentrates on structural transformation and an analysis of its causes and consequences one may expect the changes occurred actually to be more dramatic than what in fact seems to have been the case. The long-run picture conveyed is, as a matter of fact, one of gradual and smooth changes (cf. Hjerpe, 1989, p. 19). The structural adjustment problems that can be noted in the short perspective seem relatively trivial. In all analysis of long-run developments there is, however, one aspect that tends to be neglected, namely the role of quality changes and new products in the process. Even if the reason for this deplorable fact is obvious — neither traditional economic theory nor empirical method is very good at capturing this aspect — the net effect is that one tends to underestimate the change that actually has taken place. Furthermore, a major “engine of growth” is thereby also ignored.

References

- Blomqvist, H.C., “Export-Led Development Strategy: The East Asian Model,” in *Proceedings of the 12th International Symposium on Asian Studies*, Asian Research Service, Hong Kong (forthcoming).
- Blomster, M.C., *Orsakerna till emigration från Finland till Sverige mellan åren 1960 och 1980*, Unpublished master’s Swedish School of Economics and Business Administration, 1983.
- Chenery, H.B., “Structural Transformation Introduction,” in Chenery, H. and Srinivasan, T.N., eds., *Handbook of Development Economics*, 1, North-Holland, Amsterdam, 1988.
- Chenery, H.B., and M. Syrquin, *Pat-*